'Passing it on' : the army in India and the development of frontier warfare 1849-1947.

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"PASSING IT ON": THE ARMY IN INDIA AND THE DEVELOPMENT OF FRONTIER WARFARE 1849-1947

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Abstract

During the nineteenth and twentieth centuries British and Indian troops conducted an almost unbroken series of operations against the trans-border Pathan tribes on the North-West Frontier of India. Warfare in tribal territory was very different from conventional European warfare and other colonial campaigns due to the mountainous terrain and tribal military characteristics and armament. The localised Punjab Irregular Force developed a unique range of principles and minor tactics to conduct military operations in tribal territory and acquired a high degree of expertise in frontier warfare. These skills were disseminated within the force by means of oral tradition, specialised training, and Standing Orders combined with frequent practical experience. However, such skills were not retained or disseminated to the regular Bengal Army which concentrated on training for conventional military operations. Following the 1897-98 Tirah campaign, the principles and minor tactics of frontier warfare were disseminated to the regular army for the first time through official training manuals and a formal system of training. These skills dramatically increased the efficiency of regular imperial troops in later frontier campaigns, although they had to be relearned following the First World War when the Army in India suffered heavy losses in Waziristan. Training manuals were once again devised and issued to imperial troops serving in the N.W.F.P.. Although modern technology now added an important dimension to the conduct of operations, infantry remained the key and a high standard of specialised training for frontier warfare was therefore required. The development of these skills exemplified growing professionalism in India directed towards imperial requirements and had a long-term influence on other colonial campaigns and post-World War Two counter-insurgency operations against similarly lightly equipped and highly mobile guerilla adversaries.

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Abbreviations

Adj.-Gen.	Adjutant General
A.Q.	Army Quarterly
Brig.	Brigadier
Brig.-Gen.	Brigadier-General
C.A.F.	Civil Armed Forces
Capt.	Captain
C.G.S.	Chief of the General Staff
C.R.F.	Chitral Relief Force
Col.	Colonel
G.O.C.	General Officer Commanding
G.O.I.	Government of India
G.S.I.	General Staff, India
J.R.A.	Journal of the Royal Artillery
J.R.U.S.I.	Journal of the Royal United Service Institute
J.S.A.H.R.	Journal of the Society for Army Historical Research
J.S.S.	Journal of Strategic Studies
J.I.C.H.	Journal of Imperial and Commonwealth History
J.U.S.I.I.	Journal of the United Service Institute of India
L/MIL	Military Department Papers, India Office Library and Records
L/P&S	Political and Secret Department Records, India Office Library and Records
L/WS	War Staff 'WS' Series files, India Office Library and Records
Lt.	Lieutenant
Lt.-Col.	Lieutenant-Colonel

Lt.-Gen.	Lieutenant-General
L.H.C.M.A.	Liddell Hart Centre for Military Archives, King's College London
Maj.	Major
Maj.-Gen.	Major-General
N.C.O.	Non-commissioned officer
N.W.F.P.	North-West Frontier Province
Offg.	Officiating
P.I.F.	Punjab Irregular Force
P.F.F.	Punjab Frontier Force
P.P.R.E.	Professional Papers of the Corps of Royal Engineers
P.R.O.	Public Record Office, Kew
Proc. R.A.I.	Proceedings of the Royal Artillery Institution
Q.M.G.	Quarter-Master General
R.A.F.	Royal Air Force
R.E.J.	Royal Engineers Journal
R.P.	Road Protection
R.S.Q.J.	Royal Signals Quarterly Journal
S.S.I.	Secretary of State for India
T.A.	Territorial Army
T.E.F.	Tirah Expeditionary Force
T.E.W.T.	Tactical Exercise Without Troops
U.S.M.	United Service Magazine
W.O.	War Office Papers, Public Record Office

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Glossary of Pushtu Words

Algad	water course
China	a spring
Chigha	a village pursuit party
Dara	a defile or pass
Faqir	a religious mendicant
Gasht	a patrol
Ghazi	a muslim who devotes his life to killing non-infidels or fighting unbelievers.
Ghar	a mountain peak
Jihad	a religious war - equivalent to a crusade
Jirga	a tribal assembly
Kach	an alluvial flat on the bank of a stream
Kafila	a caravan
Kamar	a cliff or precipice
Kandao	a mountain pass
Khassadar	a tribal levy
Kot	a walled hamlet
Kotal	a pass
Lashkar	a tribal war party (not usually applied to less than 200 men)
Maidan	a plain or large open space
Malik	a tribal representative r elder
Mullah	a muslim priest or holy man
Narai	a pass
Nullah	a small ravine
Raghza	a plateau on the edge of a valley
Sangar	a stone breastwork
Shin	green
Spin	white
Tangi	a defile or gorge
Tauda	warm
Toi	a stream
Tor	black
Warsak	spur of a hill
Zam	a river
Wuch	dry
Ziarat	a shrine

Introduction

Throughout the nineteenth and early twentieth centuries, British imperial troops, along with a wide range of locally recruited irregulars, were almost constantly engaged in a series of military campaigns to expand and protect the far-flung British Empire. As Brian Bond has noted 'for only two years between 1856 and 1899 were the guns silent.'[1] These military operations varied widely in scale and extent, but they can be broadly classified under the headings of campaigns of conquest or annexation, campaigns to suppress insurrections and punitive campaigns in response to aggression. Such operations were known collectively as 'small wars' and represented almost the staple fare of the imperial armies. Indeed, in many respects involvement in conventional European conflicts was an aberration from the normal course of military events and small wars exerted a major influence on the development the imperial armies as institutions. As Victor Kiernan has pointed out the maintenance of imperial rule involved the frequent use and display of military power to ensure the expansion and control of various colonial possessions.[2]

As the British Empire was so vast in extent imperial troops fought in different types of climate and terrain and against a multitude of different opponents armed, organised and trained in a bewildering variety of ways. The conduct of desert, jungle, bush and mountain warfare against opponents with widely varying standards of arms, tactics and training, was very different from European warfare. Indeed, such operations represented a distinct genre of military operations that always differed from European military requirements. Most campaigns were first and foremost, however, campaigns against nature during which commanders and troops had to surmount immense difficulties imposed by the terrain, climate and vast distances that had to be traversed before contact was made with opposing armies. To complicate matters intelligence regarding imperial opponents and local geography was normally meagre. Transport and supply problems, moreover, meant British officers had to be particularly skilled at moving and maintaining troops in remote areas often ravaged by disease. To the Victorian master of colonial or 'savage warfare',

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[1] B. Bond, Victorian Military Campaigns, (London, 1967), App. 1, pp.309-11
[2] V. Kiernan, European Empires from Conquest to Collapse, (London, 1982)

Major-General Sir Garnet Wolseley, the conduct of such operations represented an 'art in itself' requiring specific tactics far different from those suited to 'civilised' opponents.[3] Following the First World War the nature of imperial conflict changed as emphasis shifted to controlling vast subject populations and guarding troubled imperial frontiers, requiring the development of new military skills and training to maintain order.

The conduct of military operations throughout the British Empire has attracted surprisingly little attention from academic military and imperial historians, in contrast to that directed towards conventional European warfare.[4] As Ian Beckett has observed, such low-intensity conflict has always enjoyed a relatively low status in the study of war, both amongst professional soldiers and new generations of academic military historians.[5] Indeed, the term 'small war' has been often been used in almost a pejorative sense, perhaps denoting the general attitude towards colonial conflict in general. The reasons for this indifference are not difficult to identify. Despite considerable interest in the popular press, contemporary British officers tended to regard experience gained in the colonies as an irrelevance, preferring instead to focus on contemporary *grande guerre*, which was both professionally more rewarding and always perceived as the primary justification for the army's existence.[6] Although many senior officers owed their promotion to colonial campaigning and accepted it as the recurrent style of warfare encountered by British troops, nonetheless few were willing to give this form of conflict priority in terms of theory. For both the British and Indian armies, moreover, the immediate military demands of colonial warfare could not be regarded as the sole determinant of military organisation, equipment and training. The 'threat' of war with a European power rather than in the British Empire always occupied centre stage in military planning and

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[3] Maj.-Gen. G. Wolseley, 'The Negro as Soldier', Fortnightly Review, 44, 264, (1888), p.703

[4] D.C. Gordon, 'Colonial Warfare 1815-1970', in R. Higham, (ed.) A Guide to the Sources of British Military History, (London, 1975), p.302, H. Strachan, European Armies and the Conduct of War, (London, 1983), p.76 and P. Burroughs, "Imperial Defence and the Victorian Army', J.I.C.H., 15, 1, (1986), p.55

[5] I.F.W. Beckett, 'Low-Intensity Conflict: Its Place on the Study of War', in D.A. Charters, M. Milner and J.B. Wilson, (eds.) Military History and the Military Profession, (London, 1993), p.121

[6] Gordon, op cit, p.229 and See J.M. MacKenzie, (ed.), Popular Imperialism and the Military, (Manchester, 1991)

training. Additionally, as imperial troops were faced with a wide variety of military tasks and diverse conditions throughout the empire, it was impossible to devise a universally applicable system of training or to anticipate where or under what conditions troops might next be employed. The sheer diversity of conditions and the limited scope of most campaigns made it difficult to formulate lessons of universal and lasting importance. Instead, the British Army concentrated on up-to-date European military organisation, equipment and training, believing by that by default the lesser was contained in the greater, and tended to regard colonial warfare as a diversion from the mainstream of professional soldiering. Such attitudes were reinforced as the experience gained on one campaign was frequently reversed by the next. Often tactical formations long discarded on the European battlefield were resurrected and used successfully in the colonies prompting accusations that such fighting led to parochialism and encouraged professional conservatism. As imperial troops often enjoyed a decisive superiority in firearms, colonial campaigns were relatively short-lived and, as no permanent 'threat' existed, any lessons discerned tended to be regarded as unique or trivial, without lasting significance for the British Army. What could a serious professional soldier learn of lasting value from operations conducted against poorly armed and ill-disciplined 'savages' who knew nothing of modern military skills and training? In some quarters it was believed that lessons learnt in the Empire could be positively harmful.[7] Colonel Lonsdale Hale, former Professor of Military History at the Staff College at Camberley, noted in 1899: 'An officer who has seen service must sweep from his mind all recollections from that service, for between Afghan, Egyptian and Zulu warfare and that of Europe, there is no similarity whatever. To the latter the former is merely the play of children.'[8] Despite the fact that many personally participated in imperial campaigns, British military intellectuals generally ignored colonial warfare, concentrating instead on European practice which had greater professional appeal. The normal course of military education for officers at the Royal Military College, Woolwich or the Staff College, largely ignored imperial campaigning. Accordingly British

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[7] E.M. Spiers, The Late Victorian Army 1868-1902, (Manchester, 1992), p.246

[8] Col. L. Hale, 'The Spirit of Tactical Operations Today', Proc.R.A.I., 16, (1889), p.45

officers tended to measure military professionalism solely against conventional European standards, despite the fact that they were more likely to fight in the Empire than on the continent. As a result of these factors the majority of European troops fighting in the colonies did so without any specific training, relying instead on 'on the spot' improvisation and pragmatic adaptation to local conditions. Although occasionally expensive in lives and prestige, 'on the spot' adaptation was normally successful as imperial troops were always better armed than their opponents. However, such a robustly pragmatic approach, an emphasis on 'down to earth' practical soldiering and the flexibility of the regimental system meant that the lessons learn from colonial conflicts were seldom recorded for the benefit of future generations.[9]

The main subject of interest to academic military historians has been the conduct of conventional military operations for similar reasons to that which determined contemporary professional military attention, despite the central role played by military power in the establishment and maintenance of imperial rule. All too often 'small wars' have been condemned by modern historiography as unequal contests during which imperial troops relied almost exclusively on technological superiority in firearms and during which they adopted retrogressive tactics more suited to the eighteenth than the nineteenth century. Attention has focused on the relative ease with which numerically inferior British troops inflicted massively disproportionate casualties and rapidly defeated indigenous armies. This has meant that it has been too readily assumed by historians that victory was inevitable.[10] D.R. Headrick's identification of breech-loading firearms and machine guns as decisive 'tools of penetration', rather that other factors such as military tactics, organisation and training has led to widespread belief that superior technology was the predominant reason for European military success.[11] To an extent D. Omissi has followed a similar line in a recent study of air policing during the inter-war period, although he

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[9] K. Jeffery,'Colonial Warfare', in C. McInnes and G.D. Sheffield, Warfare in the Twentieth Century, (London, 1988), p.31

[10] D. French, The British Way in Warfare 1688-2000, (London, 1990), p.141

[11] D.R. Headrick, 'The Tools of Empire: Technology and the Expansion of European Empires in the Nineteenth Century', Journal of Modern History, 51, 2, (1979), pp.231-63 and D.R. Headrick, Tools of Empire: Technology and European Imperialism in the Nineteenth Century, (New York, 1981)

is rather more justified with regard to aircraft as local populations could only hope to lessen their impact on the battlefield rather than employing them themselves.[12] As a result these conflicts have been condemned as being of little interest to serious modern students of the art of war. The very fact that these were 'small wars' in scale and were fought in remote out-of-the-way places about which archival material is not easily accessible has also restricted academic interest. Finally, P. Burroughs has also attributed a lack of interest amongst imperial historians in the army's exploits in defence of the empire to the comparatively unappealing character of traditional didactic and often antiquarian military history which attracted little interest from historians working in other fields.[13] Those historians that have discussed colonial conflict have been content to rely upon a work published in 1896 written by a serving British officer as the sole source of information regarding how imperial troops conducted small wars. Charles Callwell's *Small Wars: Their Principles and Practice* represents a sophisticated, comprehensive and authoritative attempt to cover the diverse requirements of conducting military operations throughout the British Empire.[14] It has justifiably been described as the only 'truly distinctive' work produced by an officer of the Victorian Army and also 'a minor classic of compression and sophistication', but it should not be regarded as the sole source of information regarding British colonial warfare.[15]

The conduct of colonial warfare has recently attracted growing interest from academic military historians. A series of important studies that focus primarily on the indigenous response to imperial encroachment have appeared, rather than the manner in which the latter conducted their campaigns.[16] The way in which the British Army adapted to the demands of colonial warfare and the influence these operations had on reform has formed the subject of only one detailed

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[12] D.E. Omissi, Air Power and Colonial Control, (Manchester, 1991)
[13] Burroughs, op cit, p.56
[14] Capt. C. Callwell, Small Wars: Their Principles and Practice, (London, 1896), 2nd Ed. 1899 and 3rd Ed. 1906
[15] I.F.W. Beckett, 'The Pen and the Sword: Reflections on Military Thought in the British Army, 1854-1914', Soldiers of the Queen, 68, (1992), p.6
[16] See J. Belich, The New Zealand Wars and the Victorian Interpretation of Racial Conflict, (Auckland, 1986) and J. Laband, Kingdom in Crisis. The Zulu Response to the British invasion of 1879, (Manchester, 1991)

scholarly study, whose central theme is the contrast between continental models of military organisation and conflicting imperial requirements. In this seminal study H.R. Bailes noted that most of British military thought during the latter Victorian period was in direct imitation of continental practice, but he has also identified the rise of an 'imperial school' of military thought consisting of officers, including Wolseley and Roberts, closely concerned with the tactics, training and military organisation required to carry out Britain's imperial commitments.[17] While adding materially to understanding of how the British Army in England adjusted to the demands of colonial warfare, this work leaves many important questions unanswered regarding the imperial response to 'small wars'. For example, it excludes any study of the Indian Army and its scope is limited to the late Victorian period. Apart from a comparatively recent collection of essays on imperialism and war, there are still too few scholarly campaign studies, accounts of colonial armies and discussions of their role in the maintenance in European empires.[18] As Sir Michael Howard observed in the concluding essay of this volume published in 1989, however, there still remains much to be said regarding the conduct of colonial campaigns and imperialism and war.[19]

The British and Indian troops that garrisoned the Indian subcontinent and formed the Army in India merit particular attention from historians interested in colonial conflict as they conducted a wide variety of campaigns throughout the British Empire. It has all too readily been assumed that the training of the Army in India followed exactly the same pattern as that of the British Army, despite it being an entirely separate military organisation. As R. Haycock has observed, British arms in India developed in a manner distinct from those of the army in England requiring an investigation in its own right.[20] During the nineteenth and twentieth centuries troops in India carried out the local military commitment of maintaining internal order and policing the border of Britain's most

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17 H.R. Bailes, The Influence of Continental Examples and Colonial Warfare upon the Reform of the Late Victorian Army, (University of London, Ph.D., 1980)
18 J. A. de Moor and H. L. Wesseling, (eds.) Imperialism and War. Essays on Colonial Wars in Asia and Africa, (Leiden, 1989)
19 Sir M. Howard, 'Colonial Wars and European Wars', in Ibid, p.223
20 R. Haycock, 'British Arms in India', in G. Jordan, (ed) British Military History. A Supplement to Robin Higham's Guide to the Sources, (London, 1988), p.457 and Gordon, op cit, p.307

important colonial possession and, rather more unofficially, conducted military operations throughout the British Empire in support of imperial interests. For example, Indian troops participated in operations in Abyssinia, Malta, Perak, East and West Africa, the Sudan and Egypt as well as providing garrisons for other colonial possessions.[21] The vast majority of campaigns fought by the Army in India, however, took place along the mountainous land frontiers of India against a variety of opponents whose arms, military organisation and tactics also varied widely. In microcosm, warfare along the extensive borders of India mirrored conditions elsewhere in the British Empire with imperial troops involved in desert, jungle, bush and mountain operations requiring tactics, organisation and training different from conventional European warfare.

The North-West Frontier of India in particular, was the scene of repeated 'small wars' and punitive expeditions, providing British and Indian troops with a source of sustained experience in conducting military operations against one particular type of tribal opponent. This necessitated the permanent commitment of large numbers of regulars and a range of irregulars recruited from the local population. In common with other imperial frontiers, the North-West Frontier marked the limit of conquest and administration of British India as well as forming the most strategically sensitive border of the Empire. It combined a local and immediate problem of tribal control with a serious external threat from Russia and Afghanistan. In many respects the former represented a far more difficult problem than the distant threat of foreign invasion. The maintenance of imperial rule along this unsettled border led to the development of a distinctive frontier style of policing and military operations. The conduct of such military operations against the trans-border Pathan tribes was a constant feature of imperial rule dating from the annexation of the Punjab in 1849 until the end of the British Raj in 1947. The inability of the local political administration to pacify the tribal areas, forced recourse to controlling or managing them by means of fines, blockades of tribal territory and punitive military operations that ranged in scale from minor skirmishes to major campaigns involving thousands of men. Between 1849-1914 there were

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[21] Bond, op cit, p.7

over 52 punitive operations in tribal no-man's land, as well as almost incessant small scale operations associated with what became known as the 'watch and ward' of the administrative border against the depredations of tribal raiders. As Philip Mason has observed, these operations represented the staple fare of the Indian Army during the Victorian period, as well as providing imperial troops with perhaps more practical experience of colonial warfare than in any other part of the British Empire.[22] Such operations continued during the inter-war period, exerting a profound influence on the Army in India. Writing in 1923 Colonel C.E. Vickery observed: 'The soldier of to-day may bemoan the absence of any fresh countries which might afford a potential outlet for his energies and his training… but there will remain for many years wars and rumours of war on the frontiers of India and elsewhere on the marches of empire.'[23] The conduct of what was known within the Army in India alternatively as tribal warfare, mountain warfare, hill warfare or more commonly frontier warfare posed a range of unique military problems far different from conventional military operations in Europe, other 'small wars' or from prior experience of the large scale campaigns fought on the Indian plains. Operations conducted by imperial troops in tribal territory were especially hampered by limited intelligence, climatic extremes and scarcity of water and food, severely complicating the transport, supply and administration of imperial troops. In comparison the local population was ideally adapted to fighting under such difficult conditions. As Charles Callwell noted in 1899: 'Hill warfare may fairly be said to constitute a special branch of the military art and indeed 'almost the most trying which disciplined soldiers can be called on to undertake.'[24]

The lessons learnt by the Army in India regarding the colonial warfare against the trans-border Pathan tribes and the particular military skills developed on the North-West Frontier have also been largely ignored by academic historians, despite the scale and frequency of operations in tribal territory. Indeed, their lasting contribution and influence on the development of military science has been positively down played. This is not surprising since attitudes

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[22] P. Mason, A Matter of Honour, An Account of the Indian Army, its Officers and Men, (London, 1974), p.337
[23] Lt.-Col. C.E. Vickery,'Small Wars', A.Q., 6, 2, (1923), p.307
[24] Callwell 1899, op cit, p.286

towards hill warfare have been romanticised by many observers and portrayed as an honourable contest, or game, between worthy adversaries.[25] The attention of popular writers and historians interested in the Indian Army has focused on its social and political history and its development as an organisation rather than in the manner in which it trained for and conducted various military campaigns.[26] The operations fought to maintain and consolidate imperial rule on the frontier of India have been left largely to popular historians whose books, intended to entertain a popular readership, are based almost entirely on secondary sources and lack analytical rigour.[27]

Three important studies exist that represent a starting point for any scholarly study of the Indian Army and frontier warfare. A book written by Captain H.L. Nevill, published in 1912, intended to familiarise British officers with the development of frontier fighting during the nineteenth and early twentieth century, forms the only instructive analytical account of mountain warfare in India.[28] However, it does not discuss how the doctrine employed by imperial troops was initially developed or how these lessons were disseminated to imperial troops. In 1968 Major-General J.G. Elliot attempted to examine the role of the Indian Army on the frontier which he believed affected the whole outlook of the military in India and its effectiveness in other conflicts.[29] The only other attempt to chart the development of expertise in mountain warfare in India during the nineteenth century appeared the same year. Unfortunately this study is poorly written, badly researched and displays an obsession with

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[25] A.S. Ahmed,'An Aspect of the Colonial Encounter on the North-West Frontier', Asian Affairs, 9, (1978), p.319. See Lt.-Gen. Sir G.F. MacMunn, The Romance of the Indian Frontiers, (London, 1931)

[26] See T.A. Heathcote, The Indian Army: The Garrison of British Imperial India, (London, 1974), D.E. Omissi, The Sepoy and the Raj: the Indian Army 1860-1940, (London, 1994) and T.A. Heathcote, The Military in British India: The Development of British Land Forces in South Asia 1600-1946, (London, 1995)

[27] See A. Swinson The North-West Frontier: People and Events 1839-1947, (London, 1967), R. Wilkinson-Latham, North-West Frontier 1837-1947, (London, 1977), C. Miller, Khyber. British India's North-West Frontier, (London, 1977), V. Schofield, Every Rock, Every Hill. The Plain Tale of the North-West Frontier and Afghanistan, (London, 1984) and M. Barthorp, The North-West Frontier: British India and Afghanistan, a pictorial history, 1839-1947, (Poole, 1982)

[28] Capt. H.L. Nevill, Campaigns on the North-West Frontier, (London, 1912).

[29] Maj.-Gen. J.G. Elliot, The Frontier 1839-1947, (London, 1968)

technical details rather than presenting a balanced picture of what actually occurred.[30]

This thesis seeks to challenge existing assumptions about military responses to colonial warfare by carrying out a detailed study of the problems encountered by imperial troops operating in tribal territory. It show the Indian Army adapted to local conditions and tactical requirements and how it developed the military principles and minor tactics required at the 'sharp end' during the repeated campaigns against the trans-border Pathan tribes. In particular, the thesis examines in detail how such military tactics were refined and 'passed on' to successive generations of British and Indian officers and men. It is based on extensive archival research and existing primary and secondary sources. Although extensive use has been made of examples from particular operations to illustrate changes in doctrine, it is not intended to be an operational history. Moreover, a discussion of the R.A.F.'s contribution to the conduct of frontier warfare has been deliberately restricted to tactical co-operation with the army as the strategy of air control was never adopted in India and also because it has formed the specific subject of a recent study.

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[30] S. Chandra, The Development of Mountain Warfare in the 19th Century, (London, M.Phil, 1968)

Chapter One
The Punjab Irregular Force and the Origins of Hill Warfare 1849-1878

The annexation of the Punjab in 1849, in the aftermath of the Second Sikh War, brought the British administration in India into direct contact with the disparate Pathan tribes inhabiting the lengthy chain of mountains marking the physical boundary between India and Afghanistan for the first time. The rugged and arid mountains of the North-West Frontier stretched 704 miles along the border of the Punjab, rising generally in height from the Sulaiman range and the Gumal pass in the south to Chitral and the Pamirs in the far north.[1] The belt of mountainous terrain varied in width between twenty and two hundred miles and was pierced by four main passes that followed the course of the Kabul, Kurram, Tochi and Gomal rivers. These formed the main arteries of trade and migration as well as the historic invasion routes into India (See Figure 1). The character of the terrain varied widely along the length of the border. At Chitral, in the far north, the terrain consisted of deeply incised wooded valleys and mountains that reached a height of over 20,000 feet.[2] Further south, in Dir, Swat and Bajaur inhabited by the Yusufzai, Tarkani and Utman Khel tribes, the mountainous terrain was intersected by fertile valleys that varied in breadth from the wide alluvial valleys in lower Swat to narrow glens in the upper reaches of the Lower Swat, Panjkora and Rud rivers. The height of the mountains, offshoots of the Hindu Kush, rapidly increased from 2,000 feet at the junction of the Swat and Panjkora Rivers to 15,000 in the north-west and to 22,000 feet in the north-east of the region.[3] The area to the north of the Khyber Pass, inhabited by the Mohmand tribes, consisted of desolate, broken rugged foothills varying between 3,000-5,000 feet in elevation, intersected by flat open

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[1] Sir W. Barton, India's North-West Frontier, (London, 1939), p.8 For a general description see Lt. C.M. Enriquez, The Pathan Borderland, (Calcutta and Simla, 1910) and Col. H.C. Wylly, From the Black Mountain to Waziristan, (London, 1912)

[2] Military Report and Gazetteer on Chitral, (Simla, 1928), pp.20-8 L/MIL/17/13/57

[3] Military Report and Gazetteer on Dir, Swat and Bajaur, (Calcutta, 1928), p.55 and p.66 L/MIL/17/13/70/1

Figure 1. The Principal Tribal Areas of the North-West Frontier of India c.1900s

valleys scored by deep dry nalas.[4] The comparatively low lying hills in the vicinity of the Khyber Pass were intersected by steep and precipitous gorges that rose steadily in height towards the Safed Koh range and the Tirah massif, inhabited by the Afridi and Orakzais tribes, that separated the Khyber Pass and Kurram Valley. Tirah itself consisted of a mass of hills that were offshoots of the Safed Koh range interspersed by long narrow steep valleys containing significant areas of cultivation. Lateral communications between the valleys was difficult as there were only a few passes through the hills.[5] The low-lying Kurram Valley represented a dramatic change from the mountains, stretching 73 miles long from Thal to the Peiwar Kotal pass that linked it with Afghanistan. It was inhabited by the Turis (Shia Muslims) who were frequently in conflict with the more orthodox (Sunni) surrounding tribes.[6] Further south, Waziristan consisted of a tangle of rugged hills and ravines rising towards the Suleiman range of mountains in the east. The hills were generally low-lying, with the exception of Pir Ghal at 11,517 feet and Shuidar at 10,942 feet, but were so rugged that they were generally inaccessible except on foot. In the central area of Waziristan the comparatively well-watered mountains were wooded and covered in dense scrub and supported the majority of the local population. This area was primarily inhabited by the Mahsuds and Wazirs, together with the smaller Bhittani and Daur tribes (See Figure 2).[7] Although many perennial rivers and streams existed, water was scarce throughout the mountains limiting cultivation. In the foothills vegetation was limited to a scattering of stunted bushes and trees. In upland areas the hills were covered with scrub jungle, dwarf palm, ilex, and fir trees along with some grassy uplands that provided grazing for flocks of sheep and goats. The climate was extremely vigorous. During the summer intense heat was experienced in the foot hills and lower valleys, although the temperature fell considerably at night at higher altitudes. During the winter, heavy snow and rainfall made the

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[4] Military Report on the Mohmand Country, (Calcutta, 1926), 3rd Ed. pp.10-13 L/MIL/17/13/91 (Hereafter Military Report on Mohmand Country)

[5] Military Report on Tribal country between Khyber and Kurram 1930, (Simla, 1930), 5th Ed. pp.11-16 L/MIL/17/13/80/1 (Hereafter Military Report on Tribal Country)

[6] Military Report on the Kohat District, (Simla, 1928), 3rd Ed. pp.18-20 and pp.35-6 L/MIL/17/13/87/1 (Hereafter Military Report on Kohat District) and Maj. C.H. Villiers-Stuart,'The Kurram and Surrounding Country', A.R., 7, (1914), pp.13-22

[7] Military Report on Waziristan 1935, (Simla, 1936), pp.104-118 L/MIL/17/13/102 (Hereafter Military Report on Waziristan)

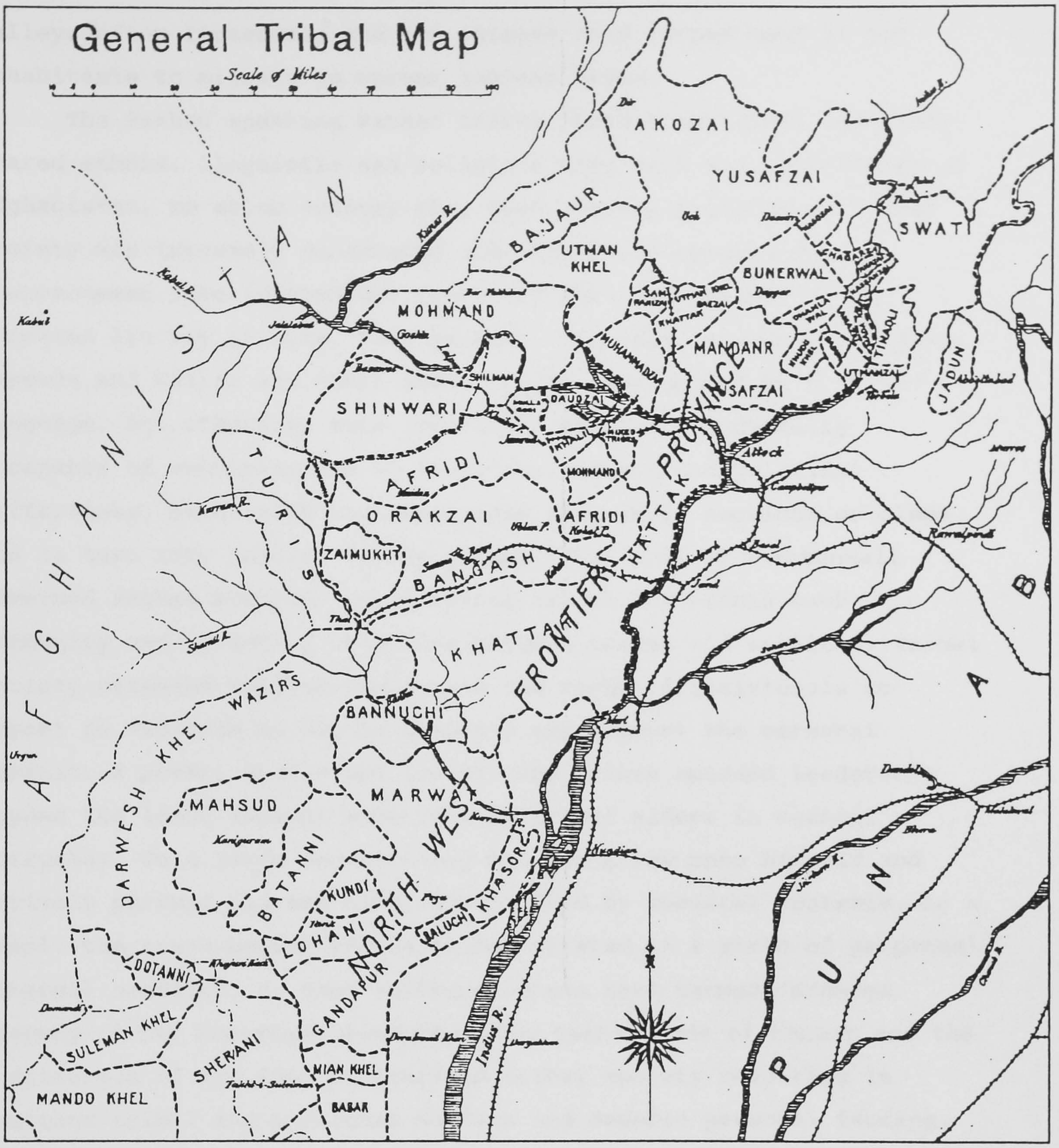

Figure 2. General Tribal Map showing the areas inhabited by the main trans-border Pathan tribes

valleys often impassable and the intense cold forced many of the inhabitants to migrate to warmer lowland areas.

The Pushtu speaking Pathan tribes inhabiting tribal territory shared ethnic, linguistic and religious ties with the inhabitants of Afghanistan, to which country they owed nominal allegiance. Tribal society was intensely democratic and vigorously opposed any encroachment into independent territory that was perceived to threaten its way of life. The Yusufzai, Mohmands, Afridis, Orakzais, Mahsuds and Wazirs and other small tribes were united by a shared language, but otherwise were internally divided and normally incapable of combining due to religious, ethnic and political differences. Each tribe was subdivided into small sections or clans and in turn into smaller family groups.[8] The code of Pukhtunwali governed Pathan society, representing tribal law within each community and directing relations between tribes and sections. Tribal society stressed egalitarianism and the right of individuals to resort to violence to settle disputes and support the personal pursuit of power, status and honour. The tribes spurned leadership beyond the loose control exercised by tribal elders in council (jirgahs). To a large degree every man was a law unto himself and actively pursued his own aims unrestricted by societal controls. As a result the trans-border Pathan tribes existed in a state of perpetual internal conflict, or what anthropologists have termed 'ordered anarchy.'[9] The insistent demands of the Pathan code of honour and the institution of the feud militarised tribal society resulting in constant tribal and sectional warfare and endemic personal feuding. Individual tribesmen were always heavily armed for self-defence and constantly sought to acquire arms and ammunition to prosecute feuds against their neighbours. Tribal settlements, clustered in the valley floors near the few cultivable patches of ground, were carefully sited for defence and heavily fortified against attack. Small hamlets, dotted along the valleys, formed the home of a single family in which fortified towers, normally over 30 feet in height, formed a refuge of last resort in the event of tribal attack. Feuding exacerbated the poverty and lack of alternative employment in the

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[8] A Dictionary of the Pathan Tribes on the North West Frontier of India, (Calcutta, 1910) L/MIL/17/13/6 See O. Caroe, The Pathans 550 B.C.-A.D. 1957, (London, 1958)
[9] A.S. Ahmed, 'Tribes and States in Central and South Asia', Asian Affairs, 11, (1980), p.156

hills. Agriculture was limited to a few herds of livestock and small patches of cultivation yielding maize, barley and rice, forcing the transhumant tribe to live in an almost symbiotic relationship with the settled areas on the plains. The heavily armed Pathan tribes posed a constant menace to the security of the trade routes through the passes into Afghanistan and an immediate and insistent threat to the border areas of the Punjab. From time immemorial the tribes had charged for safe conduct through the passes into Afghanistan and raided the adjacent plains to seize money, livestock and goods as the growing Pathan population was unable to subsist in the barren border hills.[10]

The maintenance of imperial rule in the border areas presented the British Board of Administration, appointed to govern the Punjab, with a complex problem. When it assumed control the trans-Indus areas were in a state of virtual anarchy and trans-border Pathan raiders operated with virtual impunity from the safety of the surrounding hills. Villages along the border were strongly fortified and their inhabitants heavily armed for self-protection. Indeed, the former Sikh government had only been able to collect revenue in the area at sword point using large numbers of troops. The immediate concerns of the Punjab authorities were to consolidate British rule within the border, protect their subjects from raids, keep open the trade routes and to ensure the internal security in the newly annexed areas. A system based on conciliation backed by force of arms, intended to control the border and maintain internal order, replaced the arbitrary punitive measures which had been employed by the Sikhs. Tribal independence was recognised and they were actively encouraged to trade with British India, given access to medical and other assistance and allowed to enlist in the ranks of the police and military forces to promote friendly relations. British officials were also expressly forbidden to go into tribal territory to minimise incidents in what became commonly known as the 'close border' policy. Tribal maliks and jirgahs were encouraged to seek the advice of the deputy commissioners appointed to administer the six border districts: Hazara, Peshawar, Kohat, Bannu, Dera Ismail Khan, and Dera

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[10] See A.S. Ahmed, Pukhtun economy and society, (London, 1980) and R.O. Christiansen, Conflict and Change Among the Khyber Afridis a study of British policy and Tribal Society on the North-West Frontier 1839-1947, (University of Leicester, Ph.D., 1987)

Ghazi Khan, in the resolution of disputes and to colonise land within the settled areas. It was soon realised that the payment of allowances to the hill tribes gave the political authorities a lever by which to exert control and a means to replace raiding as a main source of tribal livelihood.[41]

The military threat posed by an estimated 100,000 heavily armed Pathan fighting men to the security of the Punjab meant that other measures were also immediately undertaken to protect and control the inhabitants of the border areas. Sir Henry Lawrence was empowered by the Governor-General, Lord Dalhousie, on 18th May 1849 to raise a force for the protection of the western frontier and to ensure internal security while the strength and location of a permanent military garrison of the Punjab was determined.[42] Ten regiments - five infantry and five cavalry - were raised at stations throughout the Punjab during the summer and autumn of 1849, collectively designated the Punjab Irregular Force (P.I.F.), intended for general service in the Punjab and Trans-Indus provinces organised and equipped on similar lines to other irregular regiments in the Bengal Army. A British Commandant and three officers were appointed to each regiment, selected from the regular Bengal, Bombay and Madras armies, several of whom had served during the First Afghan War. Each infantry regiment comprised 16 Native officers, 96 N.C.O.s and 800 private soldiers armed with percussion muskets. The cavalry regiments consisted of 599 sabres and similar proportions of European and Indian officers, who were armed with a mixture of pistols, carbines, lances and swords. Native officers were recruited from the families of local chiefs on both sides of the border, while the rank and file consisted of a mixture of Sikhs, Punjabi Muslims, Dogras and both cis- and trans-border Pathans organised in mixed companies. The P.I.F. was bolstered by the permanent addition of three Light Field Batteries, raised from the former Durbar Horse Artillery, equipped with

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[41] Capt. C.C. Davies, The Problem of the North West Frontier 1890-1908, (Cambridge, 1932), pp.18-36, W.K. Fraser-Tytler, Afghanistan: A Study of Political Developments in Central Asia, (London, 1950), p.183 and J.W. Spain, The Pathan Borderland, (The Hague, 1963), pp.104-109

[42] H. Elliot, the Secretary to the Government of India with the Governor General to the Board of Administration for the affairs of the Punjab, 16th May 1849, and General Order by the Right Honorable the Governor General of India, 18th May 1849, H/761

six conventional nine pounder smooth-bore guns and a 24 pounder howitzer.[13]

After initial uncertainty as to whether it should come under the command of the regular Bengal Army, the P.I.F. was placed under the direct control of the Board of Administration of the Punjab, with regard to its organisation, training and employment. Writing in October 1850, Lord Dalhousie, the Governor General, observed that his object in excluding the P.I.F. from military control was to 'secure for the local Government the full and complete control of military means sufficient to effect any object which political considerations may, in their judgement, render it expedient to secure on that distant frontier.'[14] The decision to localise the P.I.F. solely for duty in the Punjab gave the Board of Administration almost complete control of the troops stationed along the border, enabling it to quickly respond to local developments without recourse to the central government for military support. To enable it to carry out its duties both infantry and cavalry regiments were given a permanent establishment of mules, camels and followers, as no organised commissariat system existed west of the River Indus, enabling them to respond at an hour's notice to internal unrest or tribal raids.[15] The P.I.F. was placed under the command of Brigadier J.S. Hodgson in November 1850 and given full responsibility for the 'watch and ward' or security of the administrative border stretching between Kohat and Mithunkote. Shortly afterwards various changes in the establishment of the force were confirmed by the Governor-General as well as its status under the direct control of the Board of Administration.[16] A garrison of two infantry regiments, one cavalry regiment and an artillery battery was located in each district and was held at instant readiness to stop tribal incursions, maintain internal security in the border areas and prevent outlaws from taking refuge

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[13] General Report on the Administration of the Punjab, for the years 1849-50 and 1850-51, (London, 1854), pp.24-32, Lt.-Gen. H. Daly,'The Punjab Frontier Force', J.R.U.S.I., 28, 77, (1884), pp.907-24 and R. North, The Punjab Frontier Force. A Brief Record of their Services 1846-1924, (Dera Ismail Khan, 1934), p.1

[14] Col. S. Black, Secretary to Government Punjab Military Dept, to the President Army Organization Commission, 8th Sept. 1879, L/P&S/18/A134

[15] Brig. J.S. Hodgson, Commanding Punjaub Irregular Force to Maj. H.R Burn, Deputy Secretary to the Board of Administration, 5th Dec. 1850 and Maj. H.P. Burn, Deputy Secretary to the Board of Administration to Sir H. Elliot, Secretary to Government of India with the Governor General, 17th Dec. 1850, P/42/55

[16] General Order by the Most Hon'ble the Governor General of India, 15th Feb. 1851 and Sir H. Elliot, Secretary to the Government of India with the Governor General, to the Board of Administration for the Affairs of the Punjab, 26th Feb. 1851, H/761

in the nearby hills. A chain of forts and outposts were immediately built along the length of the border between Dera Ghazi Khan, Dera Ismail Khan, Bannu, Kurram, Kohat, Asnee and Bahadur Khel. The construction of a military road parallel to the border linked the outposts and allowed troops to be shifted rapidly from area to area in response to tribal incursions. Cavalry regiments were dispersed in a chain of small mud forts, blockhouses and outposts that blocked the valleys, ravines and other lines of approach leading down from the hills used by raiding gangs. Although infantry regiments were primarily employed in garrisoning forts and larger border towns, they were held in readiness to pursue raiders if news of an impending raid was received. Additionally, small detachments held the border forts allowing the cavalry to operate in the immediate area. The intervening ground between outposts was systematically patrolled by cavalry which deterred raids, gathered intelligence and attempted to intercept parties of marauders following attacks on local villages. Although reasonably effective, these patrols were too few and too heavily encumbered to police the line of the ill-defined border effectively. Outpost duty formed the normal everyday task of both officers and men providing valuable practical training denied to the rest of the regular army requiring initiative, resourcefulness and physical fitness. Many of the duties involved in the 'watch and ward' of the border were more civil than military in character involving P.I.F. troops in a range of tasks supporting the local civil administration which considerably strengthened the latter's authority. Its men garrisoned frontier cantonments and forts, guarded treasuries and jails, furnished escorts, safeguarded cattle and livestock, protected the lives and property of British subjects living near the border. Local magistrates were empowered to call out troops in the event of tribal raids or local discontent. As civil and military officers were united under the orders of the local government close co-operation was ensured in the pacification of the trans-Indus areas. Indeed, military and police duties were synonymous during the 1850s and the denial of safe refuge in the surrounding hills to outlaws escaping British justice formed an important part of the P.I.F.'s duties. Several Commandants were assigned civil duties in addition to their military work. Captain J. Coke, for example, was both Deputy Commissioner of Kohat and C.O. of the 1st Punjab Infantry. As a result of this constant service along the border both

officers and men of the P.I.F. acquired a detailed knowledge of the tribes, their language, and customs which proved of inestimable value in the performance of their joint political and military duties.[17]

The Peshawar District, opposite the mouth of the Khyber Pass, was the only part of the border entrusted to regular troops of the Bengal Army, who were primarily responsible for defending against a conventional Afghan attack. As these duties were of a more regular nature large numbers of conventionally organised troops were permanently garrisoned in the area and were retained under the direction of the Commander-in-Chief in Bengal. During the early 1850s, forts were constructed and garrisoned by troops of the Peshawar Brigade at Abazai, Michni, Shabkadr and Fort Mackeson. The immediate defence of the border of Peshawar and Kohat districts was entrusted to the civil police, distributed in a line of small towers and outposts, while the Corps of Guides was made responsible for the protection of the Eusufzye border from raiding.[18]

The P.I.F. and the political authorities, however, were unable to provide complete security against tribal incursions along the lengthy and poorly defined border, despite a defensive system that consisted of 15 forts, over 50 outposts and a total of over 12,800 irregular and 10,821 regular troops in 1855.[19] The length of the uninhabited border, the broken scrub-covered terrain in the foothills, the close proximity of the hills and the location of many villages and areas of cultivated land well in advance of the outposts meant that a system of passive defence had limited effectiveness. It proved difficult to safeguard the local inhabitants as the administrative border between tribal territory and the plains was ill-defined and because many of the Pathan tribes owned land and lived on both sides of the border. Skirmishes regularly occurred between hostile tribesmen and British troops and villagers, who carried out their customary raids as they had under the prior Sikh government stealing property, seizing hostages and murdering several

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[17] Col. J.G. Medley,'Defence of the North West Frontier', J.U.S.I.I., 9, 45, (1880), p.288

[18] Gen. Sir P.S. Lumsden and G.R. Elsmie, Lumsden of the Guides: A Sketch of the Life of General Sir Henry Burnett Lumsden, (London, 1899), p.98 and Maj.-Gen. J.G. Elliot, The Frontier 1839-1947, (London, 1968), p.100

[19] Report Showing the Relations of the British Government with the Tribes, Independent and Dependent, on the North-West Frontier of the Punjab from Annexation in 1849 to the close of 1855, (Calcutta, 1855), p.54 and p.62 V/23/3 (Hereafter Report Showing Relations 1849-1855)

British officers in the settled areas.[20] The Secretary to the Punjab Government, R.C. Temple, observed in January 1856:

> They have kept up their own quarrels, or picked new ones, with our subjects in the plains, and valleys near the frontier; they have descended from the hills and fought these battles out in our territory; they have plundered and burnt our villages and slain our subjects; they have committed minor robberies and isolated murder without number; they have often levied black mail from our villages; they have intrigued with the disaffected everywhere, and tempted our loyal subjects to rebel; and they have for ages regarded the plain as their preserve, and its inhabitants as their game. When inclined for cruel sport, they sally forth to rob and murder, and occasionally to take prisoners into captivity for ransom. They have fired upon our own troops, and even killed our own officers in our own territories. They give asylum to every malcontent or proclaimed criminal, who can escape from British justice. They traverse at will our territories, enter our villages, trade in our markets; but few British subjects, and no servant of the British Government, would dare to enter their country on any account whatever.[21]

The political authorities attempted to control the tribes by suspending allowances, punitive fines, the seizure of hostages and economic blockades of tribal areas which were often sufficient to force a recalcitrant tribe to agree terms, especially those that lived close to the border and were dependent on trade with India. The ultimate sanction available to the administration, however, rested on force of arms to restore order and British prestige.

The P.I.F., and those regular troops stationed in Peshawar District, mounted a succession of counter-raids and punitive 'butcher and bolt', 'harry and hurry' and 'tip and run' military expeditions across the administrative border into tribal territory in response to

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[20] H.W. Bellew, Our Punjab Frontier: Being a Concise Account of the various tribes by which the North-West Frontier of British India is Inhabited; shewing its present unprotected and unsatisfactory state, and the urgent necessity that exists for immediate reconstruction. Also, brief remarks on Afghanistan and our policy in reference to that country by a Punjab Official, (Calcutta, 1868), p.12

[21] Report showing Relations 1849-1855, pp.56-7

serious tribal incursions when it was apparent that political means had failed, resulting in a state of almost constant warfare during the 1850s. A total of 15 punitive expeditions were mounted between 1849 and 1855 against the Kohat Pass Afridis, Mohmands, Miranzai tribes, Utmanzai Waziris, Hassanzais, Ranizais, Utman Khel, Bori Afridis, 'Hindustani Fanatics', Shiranis, Kasranis, Michni Mohmands, Aka Khels and Orakzais, to exact punishment for offences committed in British territory and to demonstrate the ability of imperial troops to penetrate their hills at will. However, it was soon clear that the conduct of such expeditions in tribal territory posed a range of difficult operational and political problems. Indian columns had to operate in virtually unknown country without the benefit of maps or reliable guides and initially with minimal intelligence regarding the fighting strength of the tribes. It was always difficult to identify an objective that would enable Indian troops to achieve a decisive victory and thereby secure a lasting settlement as no organised government, capital city or towns existed in tribal territory. The fighting men of a tribe or their villages and crops therefore represented the only tangible objective for an Indian column. However, when Indian troops approached, the tribes normally abandoned their homes and dispersed into the surrounding hills leaving their fighting men to conduct guerilla warfare making it impossible for Indian troops to inflict serious casualties and thereby compel them to surrender. The proximity of Afghanistan or neutral tribes, moreover, provided sanctuaries for women, children and livestock and areas where fighting men could rest and regroup. Additionally, the independent tribes were often given active support by Afghan and neighbouring tribes with food and fighting men. As a result, Indian troops were forced to exact punishment by seizing livestock and destroying villages, fortified towers, water tanks, buried reserves of food and standing crops or else to remain in temporary occupation of an area until hunger, exposure or the necessity to sow crops or compelled the tribe to pay fines of money or weapons. There was little compunction to exercise restraint, giving hill warfare a distinctive character very different from prior operations carried out by British and Indian troops on the plains. Indeed, they departed from the accepted principles of 'civilised warfare'. Sir Richard Temple, noted in 1855

> When an expedition is undertaken, then *if* the enemy were to assemble in force and take up a position and offer battle, they could be attacked and defeated, and their discomfiture might suffice as punishment, without any further measure. In *that* event the affair would be conducted after the manner of regular warfare. In civilized warfare, force is directed against the armed enemy and his defensible positions, but not against his country and subjects, who may be morally unconcerned in the hostilities and innocent of offence. *But this is not civilized warfare;* the enemy does not possess troops that stand to be attacked, *nor* defensible posts to be taken, *nor* innocent subjects to be spared. He has only rough hills to be penetrated, robber fastnesses to be scaled, and dwellings containing people, all of them to a man concerned in hostilities… To spare these villages would be about as reasonable as to spare the commissariat supplies or arsenals of a civilized enemy.[22]

Although frequently criticised on humanitarian grounds, there was little alternative to punitive operations apart from the occupation and administration of tribal territory which was politically unacceptable. The destruction of lives and property often exacerbated conflict by increasing the desire for revenge in accordance with the tenets of Pukhtunwali and thereby ensured continued clashes between the trans-border tribes and imperial troops. The political effect of the expeditions were further limited by the fact that tribes always attacked the retreating troops, improving their morale and spoiling the punitive effect.

The rugged mountainous terrain in tribal territory was the main factor that dictated the conduct of hill warfare by causing a range of tactical, logistical and administrative problems. The steep and precipitous hillsides, interspersed by a succession of knife-edge ridges, rugged spurs, cliffs, and precipices, were impassable to organised bodies of men equipped with wheeled transport and cavalry. Indian columns were compelled to advance along narrow, winding, boulder strewn river beds and valleys overlooked from vantage points in the surrounding hills. These valley floors were usually broken and

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[22] Ibid pp.59-60

intersected by deep ravines and during winter troops frequently had to cross rivers and streams. During most of the year water courses did not present an obstacle, but after sudden, heavy rainfall they could be transformed into spates, capable of sweeping men and animals away. An absence of roads, broken terrain and scarcity of water made the movement of large bodies of troops difficult and time consuming and meant the maximum distance a column could march in a single day was severely restricted. The few existing tracks through the hills were usually only narrow pathways, winding through defiles and over difficult mountain passes often requiring considerable improvement by Sappers and Miners or Pioneers before they could be used.

Indian columns operating in tribal territory had to carry large quantities of stores, food and fodder in the barren hills as only small quantities of meat, corn, rice, straw, grass, or firewood could be foraged from the surrounding area. Pack mules and camels were the only form of transport capable of moving across the broken terrain, but they placed severe administrative and logistical constraints on expeditions that were in many respects a more serious check on operations than tribal resistance. The slow-moving columns of pack animals were forced to advance in single file lengthening the line of march, causing continual stoppages while being difficult to protect. Casualties amongst the transport animals by enemy action or disease could be sufficient to impede or bring to an end military operations. As there was a limit to the number of men and animals that could be moved over one road in daylight, large forces had to be broken into several columns and moved by separate routes. The movement, protection and supply of columns dependent on pack transport limited their maximum strength to no larger than four or five battalions, a mountain battery and a company of sappers. Such a force required approximately 5,000 mules to supply it in the field for only a short period of time. Indeed, transport and supply difficulties made it imperative that no larger a force than was absolutely necessary was employed in the mountains. A large proportion of the carrying capacity of pack transport was devoted to carrying forage for the animals themselves, whose protection, care and management was of particular importance to the troops who were completely dependent on them during a hill campaign.

The conduct of military operations by Indian troops in tribal territory could also be hamstrung by the climate and endemic

diseases. The sickness and mortality rates amongst imperial troops and followers from malaria, sandfly fever, dysentery, diarrhoea, enteric fever, typhoid fever, pneumonia, bronchitis and cholera, were often greatly in excess of the casualties inflicted during the course of fighting. Heat-stroke during the summer and intense cold with heavy snowfalls during the winter dictated when and where operations could take place and led to heavy casualties that could incapacitate entire units. Animal transport was also highly susceptible to disease: surra, anthrax, rinder-pest, foot and mouth, and sore feet through bad husbandry could bring an operation to a halt. The scarcity of water also acted as a powerful constraint and limited the areas in which British columns could operate and the length of time they could remain in the hills.[23]

The military characteristics, tactics and arms employed by the Pathans also determined the tactics employed by Indian troops. Tribal society lacked any formal military organisation in a European sense. However, when an external threat overrode the internal divisions that normally prevented the tribes from acting together, the fighting strength of a Pathan tribe or section would unite to form a lashkar ('war party') whose characteristics reflected the loose social and political organisation of tribal society. Mullahs settled internal differences and arranged truces between individuals or families at feud, allowing a tribe to decide a plan of campaign, the number of men to be provided by each section, a rendezvous and date of assembly and to choose a leader. The size of lashkars could vary widely from small parties to several thousand men, although the capacity of the surrounding area to support a force dictated its maximum size. A lashkar normally lacked regular leadership, discipline, organisation or any form of organised transport or supply arrangements. Command would normally devolve on a charismatic individual or religious leader with sufficient influence or personal leadership to weld the fighting men together. The acephalous and egalitarian nature of Pathan society, however, precluded effective leadership over any extended period of time. Individual tribesmen would report equipped with their own arms, ammunition, blanket and food at a chosen place to form the lashkar, which would also be accompanied by unarmed men

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[23] Military Report on Waziristan, pp.119-21 L/MIL/17/13/102, Military Report on Tribal Country, pp.17-18 and Military Report on Mohmand Country, pp.13-14

and boys who carried food, ammunition and wounded and acted as reinforcements employing discarded weapons when men were killed or wounded. A lashkar was incapable of maintaining itself in the field for a period longer than ten days and, once the supplies carried by individual tribesmen were exhausted, they had to return home or forcibly requisition food, water and ammunition from local villages. A lashkar would also lose what limited cohesion it possessed if defeated, as its discredited leaders lost all authority and were unable to rally the tribesmen or organise further opposition. Lashkarwals would disperse to their homes carrying their dead and wounded, mourn their dead and wait while tribal jirgas deliberated the need for further action. The strength of a lashkar therefore was liable to fluctuate wildly in accordance with its mercurial morale, the state of its provisions and the success of the fighting in progress. Despite these inherent defects lightly equipped lashkars enjoyed a considerable tactical and strategic advantage over Indian troops as they were less circumscribed by supply and transport difficulties. Indeed, their ability to assemble or disperse large numbers of men at short notice was a source of considerable flexibility and strength, although the absence of effective leadership, cohesion or collective discipline meant that lashkars were often unable to act quickly or to unite and mount a vigorous defence.[24]

The martial skills developed and refined by individual tribesmen during years of feuding and inter-tribal warfare made lashkars highly effective. Accustomed to fighting from youth, Pathan tribesmen were physically fit, skilled at skirmishing, fieldcraft and the use of arms and were inured to local diseases. Unlike imperial troops, tribesmen were intimately acquainted with the local terrain, paths, and resources. Tribal clothing - baggy trousers, grass chaplis on feet, flowing grey shirts bound with leather ammunition belts and untidy pagris - and their skill in utilising the hillsides for cover and concealment made it difficult to locate tribesmen skirmishing over the hills. Tribal lashkars normally attempted to hold defensive positions at ridges or passes which were heavily fortified with sangars, sited to allow frontal and flanking fire on the probable

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[24] Spain, op cit, pp.76-7, and A.S. Ahmed,'Pukhtun Tribes in the Great Game', Asian Affairs, 11, (1980), pp.139-40

line of advance of an attacking force, where they would mount a determined resistance. Each tribesman fought according to personal judgement once fighting began exploiting the terrain for cover and concealment, advancing or retiring as the fighting developed. Pathan tribesmen would seldom remain to fight at close-quarters with the assaulting troops and, if their flanks, rear or line of retreat were threatened, would disperse into the surrounding hills before an organised pursuit could be mounted. Lashkars excelled at desultory hit-and-run guerilla warfare, attacking isolated parties of troops, raiding convoys on the lines of communication, sniping foraging parties, and attacking rearguards at the end of each day's operations. When the situation offered a prospect of success the tribesmen would seize the opportunity to attack with considerable élan and engage in hand-to-hand combat. Their speed and mobility across the rough, precipitous terrain, enabled lashkars to ebb and flow around Indian columns and easily evade attacks by organised bodies of troops giving them the freedom to choose the time and place for an attack and to keep the initiative.

The locally manufactured firearms, long knives, swords, and shields employed by trans-border Pathan lashkars also greatly affected Indian tactics. Following the First Afghan War the Pathan tribes had steadily acquired a large number of matchlock or flintlock jezails - a muzzle-loading rifled musket - whose range and accuracy outclassed the Brown Bess percussion muskets employed by Indian troops giving tribesmen a distinct qualitative advantage in small arms.[25] Jezails allowed lashkars to harass British columns from out of range without effective reply. The acquisition of jezails altered tribal methods from reliance on shock tactics and hand-to-hand combat to guerrilla warfare against Indian columns. However, jezails were not as highly effective as many Indian officers believed. Tests on two jezails purchased in the Khyber Pass in 1875, by the Adjutant-General for Musketry, indicated that the effectiveness of these weapons had been overestimated by those troops against which they had been used. Both weapons were crudely manufactured, inaccurate and had an effective range of only 300 yards. The majority of the tribesmen were armed with swords, knives and shields, making them reliant on

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[25] Lt.-Col. W. Gordon, Chief Inspector of Musketry, to the Adj.-Gen., 4th Dec. 1867, L/MIL/3/784, Christiansen, op cit, pp.286-7 and Elliot, op cit, p.111

combat at close quarters. However, a combination of charges mounted by large numbers of Pathan swordsmen, concerted with Jezail fire, posed a difficult problem for imperial troops who were forced to mass in close contact with each other making them, in turn, vulnerable to rifle fire.[26]

The P.I.F.'s regiments and batteries quickly learnt that conventional tactics, training and equipment devised for operations on the Indian plains against similarly armed, organised and trained troops, were of little use in tribal territory. Indeed, it was soon apparent that military operations against the trans-border Pathan tribes represented a distinctive form of warfare requiring the development of operational principles and specific minor tactics for each arm of service. It was fortunate that the ranks of several P.I.F. regiments had officers with prior experience of the tribes, dating from the First Afghan War, who could provide initial guidance in the tactics of mountain warfare against a tribal opponent.[27]

The P.I.F.'s infantry regiments soon learned that the tribes were unwilling to engage in a stand up fight with Indian troops. Major J. Nicholson, Deputy Commissioner at Bannu, noted in September 1853: 'It is not the policy and never has been the practice of any of the tribes on this frontier to meet our troops openly in the field. Any operations in which this force has been engaged have been skirmishing of greater or less magnitude, on broken or hilly ground… The tribes are not likely to alter their tactics which are the best indeed they could adopt. When strife occurs therefore it will always be of the same character.'[28] The infantry regiments bore the brunt of the fighting in tribal territory and their men had to employ light infantry skills in place of ponderous formal battalion drill, with its reliance on iron collective discipline, close-order line and column formations that dominated training in the regular Bengal Army. It was impossible to maintain close-order infantry formations or exploit disciplined massed firepower across the broken hill sides making it essential to employ loose, flexible, skirmishing tactics, modelled on those used by their Pathan opponents utilising the ground for cover and concealment. Additionally, they had to develop the

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[26] Maj. W. MacKinnon,'Jezail Experiments', J.U.S.I.I., 4, 20, (1875), pp.201-3
[27] Elliot, op cit, p.27
[28] Maj. J. Nicholson, Deputy Commissioner, to Maj. J.D. Macpherson, Military Secretary to the Chief Commissioner, 4th Sept. 1853, F/4/2549

individual skills of marksmanship and fieldcraft along with sufficient physical fitness to enable them to move quickly over the hillsides carrying their arms, ammunition and equipment. The dispersion required on the battlefield meant officers and men had to be self-reliant, well-motivated and able to exercise considerable individual initiative in comparison to those serving in the regular army. Personal equipment was reduced to a minimum light marching order and men frequently wore grass sandals in place of boots to increase their mobility. A less conspicuous khaki uniform was adopted by infantry regiments in January 1853, instead of the heavy and easily noticeable scarlet clothing used in the Bengal Army, to provide effective camouflage during operations conducted against the brown backdrop of the arid border hills.[29] The smoothbore percussion musket, with which the majority of the infantry regiments were equipped, also proved unsuitable for fighting in the hills. Its short range, inaccuracy and heavy weight placed Indian troops at a marked disadvantage when opposed by lightly equipped tribesmen armed with jezails. During operations in the hills bordering the Derajat the superiority of the rifles arming the 1st Punjab Infantry was quickly demonstrated and Brigadier General J.S. Hodgson requested in May 1853 that the light companies in each infantry regiment should be armed with similar weapons, so that they could be brigaded together to form a corps of riflemen in event of an emergency:

> The nature of Hill warfare presents almost invariably the same characteristics. Viz: an enemy previously posted in favourable positions and enjoying the superior advantage of good cover, to dislodge them from which necessitates great personal exposure on the part of the attacking party. I have therefore considered it most incumbent on me to recommend that the Light Companies of the Punjaub Infantry should be supplied with the Rifle, as a weapon obviously better calculated to meet these difficulties, and the possession of which would, besides, inspiring increased confidence, enable soldiers so armed to oppose on comparatively

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[29] Selections from the Records of the Government of India. (Foreign Department). No. VI Report on the Administration of the Punjab, Territories, comprising the Punjab Proper and the Cis and Trans-Sutlej States, for the Years 1851-52 and 1852-53, (Calcutta, 1853), pp.36-7 V/23/1 (Hereafter Selections from Records No. VI)

> equal terms a well placed foe firing from a rest with the long range jezail.[30]

The proposal to rearm P.I.F. regiments with rifles was widely supported by political and military officers accustomed to tribal tactics, although it was felt that a small proportion of muskets should be kept in case of a major incursion into the plains or hostilities with Afghan troops.[31] The training given to light infantry regiments was also deemed of special importance for fighting against Pathan irregulars. Major J.D. Macpherson, Military Secretary to the Punjab Government, noted: 'The drill also of Rifle Corps give the men a great superiority over soldiers trained to the Battalion exercise. In the one case the men are taught to act singly, to take advantage of all cover, to rely on the excellence of their weapon…'[32] Two complete regiments were re-armed with two-grooved Brunswick Rifles so that rifle regiments could be stationed permanently at Kohat, and in the Upper and Lower Derajat, in addition to the flank companies of the remaining units. Although slow and difficult to load in comparison to the musket, the greater accuracy and range of 200-300 yards enabled Indian troops to oppose tribal lashkars on equal terms for the first time.[33] The number of Brunswick rifles issued to the infantry steadily increased until, by 1856, four complete infantry regiments and the light companies of the remaining four had received the weapon.[34]

The mountainous terrain and lack of roads made the employment of conventional horse-drawn wheeled field artillery that equipped the P.I.F.'s three light field batteries and those batteries of the Bengal Army at Peshawar impossible. Two specialised mountain artillery trains, modelled on units improvised during the Nepalese

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[30] Brig. J.S. Hodgson, Commanding Punjab Irregular Force, to Maj. H.D. Macpherson, Military Secretary to the Commissioner, 29th April 1853, P/200/36

[31] Lt.-Col. Mackeson, Commissioner & Superintendent Peshawar Division, to Maj. J.D. Macpherson, Military Secretary to the Chief Commissioner, 2nd Sept. 1853, Brig. J.S Hodgson, Commanding Punjab Irregular Force, to Maj. J.D. Macpherson, Off. Military Secretary to the Chief Commissioner, 4th Sept. 1853, and Capt. J. Coke, Commanding 1st Punjab Infantry to Maj. J.D. Macpherson, 22nd Dec. 1853, F/4/2549

[32] Maj. J.D. Macpherson, Offg. Military Secretary Chief Commissioner Punjab, to Lt.-Col R.J. Birch, Offg. Secretary to the Govt. of India in the Military Department, 11th Oct. 1853, F/4/2549

[33] Minute by the Governor General, 3rd Nov. 1853, Lt.-Col. R.J. Birch, Off. Secretary to the Government of India in the Military Dept. to J. Lawrence, Chief Commissioner Punjab, 9th Nov. 1853, F/4/2549

[34] Selections from Records No. VI, p.37 and Records of the Government of India Report on the Administration of Public Affairs in the Punjaub Territories from 1854-55 to 1855-56 Inclusive, (Calcutta, 1856), pp.94-5 V/10/2

and First Afghan War, were raised by the Bengal Army during the early 1850s and equipped with light ordnance - 3-pounder guns, 24-pounder howitzer and 4 1/2 inch mortars - which could be broken down and carried in small loads by pack mules. The Peshawar and Hazara Mountain Trains' guns were capable of coming quickly in and out of action in the hills at very restricted positions and rapidly demonstrated their utility during the Hassanzais expedition on the Black Mountain.[35] Brigadier Hodgson requested that a mountain train should be added to the P.I.F. in October 1852, but instead two 3 pounder mountain guns were attached to the light field batteries stationed at Kohat and Bannu.[36] The comparative immobility of the mountain batteries to infantry and the strain they placed on transport and supply arrangements, meant that they normally formed a small component of any force operating in the border hills. Indeed the paucity of guns, lack of shell power and the difficulty of ammunition supply meant the main fighting had to be carried out by the infantry although mountain guns provided invaluable close fire support to the troops in both the attack and defence. An absence of opposing artillery and the short range of tribal jezails meant that mountain gunners were able to operate in close proximity to the forward troops. Artillery enjoyed an unprecedented moral superiority over the poorly armed tribesmen who were unaccustomed to its employment, magnifying the normally limited physical effect caused by the light weight, small calibre shells which were often unable to dislodge defenders entrenched behind boulders and sangars or engage tribesmen hidden behind hill crests. During operations, batteries were frequently broken into two gun divisions which operated independently in support of the infantry. Although such close support tactics were highly effective, care had to be taken not to employ artillery batteries too early in a battle for fear that they would drive off the tribesmen and prevent a general engagement with a lashkar.[37]

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[35] Brig.-Gen. C.A. Graham, A History of the Indian Mountain Artillery, (Aldershot, 1957), pp.4-6

[36] Brig. J.S. Hodgson, Commanding Punjaub Irregular Force, to Maj. N. Chamberlain, Military Secretary to the Board of Administration, 5th Oct. 1852, and C. Allen, Offg. Secretary to the Government of India to the Board of Administration for the affairs of the Punjab, 10th Nov. 1852, P/43/63

[37] R.H. Scales, Artillery in Small Wars: The Evolution of British Army Doctrine 1860-1914, (Ph.D., Duke University, 1976), p.80

The P.I.F.'s cavalry regiments were seldom employed in punitive expeditions due to the vulnerability of horsemen in the mountains, except for an occasional detached squadron to safeguard the line of communications, escort convoys, and for orderly work. Cavalry had a valuable moral effect on the tribesmen out of proportion to its physical impact since the majority of the hill tribes were unaccustomed to horses. An opportunity to use the arme blanche in hill warfare was rare and the cavalry were relegated primarily to the duties of watch and ward along the administrative border of the Punjab during which they developed considerable mobility and skill at moving over difficult ground. On several occasions small bodies of horsemen dealt with large raiding parties operating out of the safety of the hills.[38]

The P.I.F. devised specialised tactics to conduct an attack in the hills, protect columns on the march, protect columns when halted at night and to govern the conduct of withdrawal in contact with hostile tribesmen that were dominated by the twin principles of offensive action and the maintenance of security. The maintenance of the offensive throughout operations against the tribes was accepted as a basic principle of hill warfare, to exploit lashkar's lack of cohesion, demoralise its members and exploit the superior discipline and training of Indian troops. Attacks on a large scale were an exception, however, rather than the rule except at the beginning of a campaign when tribesmen occupied strong defensible positions blocking a line of advance into the hills. A combination of a frontal attack with an enveloping movement on one or both flanks was frequently employed to force tribesmen out of strong defensive positions when they stood to fight and to inflict heavy casualties on a retreating lashkar which normally bolted when its line of retreat was threatened. The short range of Pathan matchlocks and jezails meant flanking attacks had only to cover relatively short distances with little loss of life and delay. Attacks or retirements were made in bounds up spurs or along ridges carefully avoiding low ground or re-entrants where troops could be fired upon from above or surrounded. Reserves and supports moved closely behind the firing line, providing covering fire as an attack progressed and using flanking fire to

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[38] See History of the 1st Punjab Cavalry, (Lahore, 1887), History of the Second Panjáb Cavalry, (London, 1888) and History of the 23rd Cavalry (Frontier Force), late 3rd Regiment, Punjab Cavalry, (No imprint, c.1910)

clear sangars and breastworks. A close-order line was still required shortly before an enemy position was reached to meet a charge by Pathan swordsmen. Hill warfare necessitated the dispersion and the decentralisation of command and control to give Indian columns the degree of flexibility required when operating across difficult terrain. Fighting frequently devolved into a series of separate unrelated skirmishes, rather than a formal set-piece encounter under the direct control of senior officers.

Indian columns operating in tribal territory seldom encountered serious resistance from tribal lashkars. Instead lashkars normally concentrated on attacking and harassing Indian columns as they marched through tribal territory. The comparative immobility of Indian columns to tribal lashkars exposed them to attack from the flank, rear and directly against the vulnerable pack transport which made ensuring all-round security of special importance. The essence of the tactical problem lay in ensuring the security of the main body of a column and protecting its long, vulnerable train of pack transport from attack from the surrounding hills. It was quickly discovered that the key lay in controlling the flanking ground and dominating the surrounding area by 'crowning the heights' on either side of the route of march with small parties of troops who occupied all high ground or tactically important features within effective jezail range of a column. The number and distribution of such protective detachments varied widely according to the terrain, but all had to be built approximately 300 yards from the vulnerable transport animals to prevent sniping. The short range of Pathan jezails meant that piquets were seldom overlooked by other positions within effective range and were secure except from direct assault by the tribesmen. A ring of piquets provided all-round defence to the main body of the column as it moved along the valley floor denying positions from where tribesmen could fire on the troops and blocking nullahs and covering lines of approach to the valley below that could be used by swordsmen. Tribesmen were seldom prepared to attack uphill and were wary of moving in the vicinity of piquets, although piquet positions were normally fortified with sangars.

The piquets deployed on the flanks of an advancing column would rejoin the main body once the rear guard had passed out of effective range of their position, which could then be safely abandoned to the enemy. Piquets retired with speed down the hill sides in an endeavour

to get out of the range of hostile tribesmen occupying their previous positions on the hill top and to prevent slowing the column. If casualties were suffered it became axiomatic to immediately counterattack to recover dead and wounded and to reoccupy the position. Piqueting required a high degree of physical fitness, drill, co-ordination, intelligence, and personal skill if the 'crowning' of the heights along the line of march was to proceed without impeding a column's progress and ensure complete security. The selection of the tactical features that needed to be piqueted and the routes by which detachments should advance across the intervening ground, required an officer with a practised and skilful eye in the advance guard. The posting and withdrawal of piquets led to the development of elaborate codes and drills by the P.I.F. The evacuation of a piquet was often the point of greatest danger as tribesmen sought to seize the vacant position and attack its retreating garrison. During a withdrawal the main body of the piquet would retire leaving a small party consisting of an officer or N.C.O. and a handful of men who would make as much noise as possible and then quickly retreat from the position once the rest of the piquet had rejoined the main column. The premature evacuation of a piquet could endanger the security of an entire column or the other piquets and necessitate rapid counter-attacks to recover the position from the enemy.

The protection and security of British encampments at night was based on similar principles as those used to protect a column on the march. The mountainous terrain forced troops, followers and pack animals to encamp on the valley floors, where sufficient level ground and water was available, but such locations were vulnerable to sniping as they were always commanded by the surrounding hills and the ground was often poorly suited to defence. The surrounding heights dominating the camp were held by small detachments of troops ordered to hold the position overnight to deny the tribesmen sniping positions and dominate lines of approach to the encampment below. Piquets could not provide complete protection, however, from sniping at close range, attacks by tribesmen who infiltrated the outer ring of defences or thieves intent on stealing rifles or equipment from Indian troops. The defence of the main body from a surprise attack was ensured by the construction of elaborate field defences encompassing the limits of the encampment. A perimeter wall or

breastwork, built from rocks, stores, or bales of fodder, backed by a trench was constructed to stop tribesmen rushing a camp, to provide cover from sniping, shelter for sleeping troops and to prevent rifle thieves from infiltrating an encampment. Infantry units were deployed along the length of the perimeter while the central area was reserved for the transport, cavalry or other non-combatant units. Within its walls, messes and sleeping places were often dug down into the ground or sangared in an endeavour to protect against sniping into the densely packed perimeter camp. The construction of such elaborate defences was time consuming and meant that columns had to encamp long before nightfall in order to allow sufficient time for their completion while it was still light. However, the importance of such elaborate perimeter defences was demonstrated on numerous occasions when large parties of swordsmen penetrated the surrounding ring of piquets and launched desperate attacks on the troops in the valley below.

The conduct of a withdrawal in contact with hostile tribesmen, an operation that occurred frequently, was the most difficult phase of an expedition in tribal territory during which the heaviest fighting normally occurred. A lashkar would normally interpret a withdrawal as a sign of success causing the scale and intensity of attacks to dramatically increase. The superior mobility of tribal skirmishers and local knowledge gave them an advantage in pressing a retirement which normally left commanding positions in tribal hands from where heavy fire could be delivered on the withdrawing imperial troops. The gradual retirement of a rearguard had to be covered by infantry and artillery in successive layback positions until out of effective range of the tribesmen. Such operations required considerable skill, discipline, intelligence, careful control and eye for the ground by officers in order to be achieved without loss. Mountain artillery normally acted as the mainstay of a withdrawal leap-frogging back from successive firing points in the same manner as the infantry. The loss of dead and wounded necessitated rapid counter-attacks to recover casualties before they fell into tribal hands as European or Hindu prisoners were normally tortured and mutilated greatly affecting the conduct of operations by Indian troops. As the numbers of wounded increased, so the pace of the retreat would slow as men were encumbered with dead, wounded and rifles which could not be allowed to fall into tribal hands.

The principles and minor tactics devised by the P.I.F. to conduct what became known as hill warfare were a practical, pragmatic and highly effective response to local conditions. During the 1850s P.I.F. regiments carried out the majority of hill campaigns alone giving it an unrivalled expertise in mountain warfare. Free from the overall direction and straitjacket of the regular military authorities, it was able to adapt its arms, equipment and training to take local conditions into account and meet the local military requirements of mountain warfare. A permanent establishment of regimental pack transport allowed P.I.F. units to move quickly and with comparative ease through the border hills and was critical in ensuring the success of military operations in which so much depended on transport and supply. As a result of the P.I.F.'s permanent commitment to the watch and ward of the border, both officers and men gained an intimate knowledge of tribal territory and its inhabitants together with practical experience of mountain warfare during repeated punitive expeditions and skirmishes with trans-border Pathan lashkars. During such operations and while on outpost duty both British and Indian officers learnt to exercise a degree of initiative and self-reliance unknown in the regular army. A high state of efficiency was maintained by Brigadier General Hodgson during the brief periods of peace along the border, who directed that both regiments and batteries should frequently exercise their men and transport in full marching order near their cantonments as if engaged against hostile tribesmen.[39] Isolated from the mainstream of military life in India by distance and the Indus river and relieved only between the border cantonments its officers and men developed a high standard of military professionalism devoted solely to local political and military requirements. The resulting close co-operation that developed between its regiments and batteries, high standard of training and ésprit-de-corps within the force that developed added considerably to its effectiveness. Indeed, despite the harsh conditions in the border cantonments, the unrivalled opportunities for active service and its growing reputation meant competition was fierce amongst officers to serve in its regiments and batteries.

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[39] Brig.-Gen. J.S. Hodgson to Maj. H.D. Macpherson, Offg. Military Secretary to the Chief Commissioner, 10th March 1853, P/200/25

In comparison, the regular Bengal Army regiments and British units that garrisoned Peshawar District, trained solely in conventional operations, lacked knowledge of tribal tactics or suitable transport, equipment and training adapted to the exigencies of mountain warfare. Armed with muzzle-loading muskets, clothed in scarlet uniforms and accompanied by large quantities of baggage, regular troops proved highly vulnerable in the hills. Knowledge of mountain warfare could only be acquired through close contact with the P.I.F. in the field or had to be bought by experience by the successive commanders and regiments posted to Peshawar District at a high cost in lives, reputations and prestige. Columns composed of regular troops employed in the hills lacked a similar degree of mobility as P.I.F. units, as prior to 1861 no standing transport was maintained by regular units during peacetime and it had to be extemporised before each campaign. The collection of sufficient animals, carriage and followers in the Punjab often delayed operations for several weeks. Additionally officers lacked local knowledge of the country, its inhabitants, and tribal tactics which could not be obtained in the normal course of service when corps were relieved every two or three years. S.S. Thorburn later observed:

> In hill fighting the garrison was only strong through numbers and discipline. In fact, no troops in the Bengal army were adapted for guerilla warfare in the mountains: Britishers and Hindustanis alike were plainsmen, not cragsmen, and neither moved unless accompanied by immense baggage trains. Owing to these disabilities expeditions launched from Peshawar were infrequent, and when undertaken were very costly, formal, and ineffective campaigns carried on close to a base within our border than the rough-and-ready sort of marching customary in the Derajat.[40]

The periodic relief of units carried out within the Bengal Presidency, militated against the assimilation or dissemination of local knowledge and practical experience of mountain warfare. Any information gained through practical experience was soon lost before it could be passed on to the rest of the regular army as units

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[40] S.S. Thorburn, The Punjab in Peace and War, (Edinburgh and London, 1904), p.294

returned to the mainstream of professional soldiering in India with its emphasis on conventional European warfare.

The P.I.F. proved a highly successful military response to the exigencies of the watch and ward of the administrative border and punitive operations in tribal territory. In 1855 it assumed responsibility for the watch and ward of the border between Mardan and Abbottabad, with Peshawar District intervening between its existing garrisons at Kohat and in the Derajat. During the 1850s the P.I.F. regiments served without relief in the isolated border cantonments, despite the harsh conditions, apart from an occasional interlude at Abbottabad in the green mountains of Hazara. The strength of the force steadily grew to five regiments of cavalry, six regiments of Punjab infantry, the Corps of Guides, four regiments of Sikh infantry, three Light Field Batteries, two mountain trains and a garrison battery.[41] An additional Gurkha regiment was raised at Abbottabad in 1858, to provide sufficient manpower to police the new part of the border and to provide a Hindu counterpoise to the rest of the largely Muslim regiments.[42] The P.I.F.'s officers and men were highly efficient in their military duties as by 1857 some of its units had participated in no less than 20 different expeditions or skirmishes with the trans-border tribes. Indeed, the isolation of the P.I.F. from the rest of the Indian Army along the remote border of the Punjab had wider significance during the summer of 1857, following the outbreak of mutiny within the ranks of the Bengal Army, when its regiments and batteries formed the backbone of the force despatched from the Punjab to central India, the North-West Provinces and Oude to suppress the rebellion. Its training, experience and rough and ready organisation proved ideally suited to operations on the Indian plains, refuting claims that troops trained solely to mountain warfare were incapable of holding their own in conventional military operations. Indeed, it was so successful that it formed the model on which the whole native army was reorganised when the fighting ended.[43]

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[41] Report on the Administration of Public Affairs in the Punjaub Territories from 1854-55 to 1855-56 Inclusive, (Calcutta, 1856), p.97 V/10/2

[42] History of the 5th Royal Gurkha Rifles (Frontier Force) 1858-1928, (Aldershot, 1929), p.3 (Hereafter History of the 5th Royal Gurkha Rifles,)

[43] A.H. Shibly, The Reorganisation of the Indian Armies, 1858-79, (London Ph.D., 1969) p.124

The P.I.F. resumed the watch and ward of the administrative border when the fighting in central India ended, replacing tribal levies raised during the war, although the independence of such a large number of men outside the jurisdiction of the Commander-in-Chief was questioned during the ensuing debate regarding the reorganisation of the Indian Army.[44] The resulting discussions reflected the perceived military and political importance of a localised force being maintained in the Punjab. Brigadier-General Sir N. Chamberlain, the P.I.F.'s current commander, emphasised the joint political and military role of the force and stressed the importance of it being localised in the Punjab to maintain its intimate knowledge of the frontier and its inhabitants. He argued that its men had become accustomed to mountain warfare by repeated operations against the trans-border tribes and that by experience, organisation, recruitment and training the P.I.F. was now ideally fitted for the conduct of military operations against the hill tribes. The Commissioner of Peshawar, Captain W. James, was more effusive in his support for the continued localisation of the P.I.F. and emphasised the unique character of the fighting in which it was employed:

> Everyone who has been engaged on expeditions on this frontier must admit that it is a peculiar kind of warfare, requiring special training of officers and men. Independent of the harassing duties attendant on campaigning everywhere, there are peculiar difficulties to be encountered in the hills on the border, and which are overcome by practice only. I have no hesitation in saying that troops freshly and indiscriminately brought to the work must fail; even physically they would break down. I can assure the Government that I have seen sepoys of the Regular Army *shot down and cut down* on the hill side perfectly helpless, whilst their comrades of the Irregular Force have been driving the enemy up a neighbouring hill; and if we look to smaller matters (which in truth make up the efficiency of the whole) we shall see how the Irregular of the Punjab Force excels his comrade of the Regular Army… It is necessary to occupy many points, and to keep up communications

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[44] Maj. R.C. Lawrence, Secretary to Government, Punjaub, Military Department, to Maj.-Gen. R.J. Birch. Secretary to the Government of India Military Department, with the Governor General, 25th Oct. 1859, P/191/144

with them all; this involves the detachment of many parties, and Native Officers and Non-Commissioned Officers are frequently Commanding small but important posts, in which intelligence, care, and prudence of mind, and knowledge of the enemy's tactics to extricate themselves from, Such incidents are unobserved generally, but the enemy is acquainted with them, and they frequently tend, as much as more open signs of power and skill, to the successful result of the day; and to establish a wholesome fear of our men.

Such whole hearted support for the P.I.F. contrasted sharply with the biting criticism he reserved for the ability of the regular Bengal Army regiments:

> Conceive a General had never before seen an expedition of the kind, with a force which found itself on the frontier in ordinary course of relief!! Supposing the General and his Officers to be even superior to the ordinary men;- we require no prophetic skill to calculate the rest - not aware of the style of the enemy's warfare, of the nature of the country he is about to penetrate, of the arrangements found by experience to be required for the efficiency and comfort of his men, of the weak points of our organisation under such circumstances, of the manner in which the enemy can most readily inflict loss on us, of the arrangements for the wounded, and above all of what men can and what they cannot do, it would be a miracle if he avoid a disaster… Nothing which I have said can, I trust, be considered in any way disparaging to the officers of the other divisions of the army. I simply assert that, while the main principles of war must be the same anywhere, yet its details are necessarily dependent on the character of the enemy and that these can be mastered only by experience and practice: any attempt to theorize will prove abortive, and just as peculiar training is necessary for the various departments of the same profession in civil life, so it is essential in the Army.[45]

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[45] Maj. G. Hutchinson, Offg. Secretary to Government Punjab, Military Department, to Maj.-Gen. Sir R.G. Birch, Secretary to the Government of India in the Military Department, 1st Oct. 1860, P/191/44

Despite the Commander-in-Chief's continued objections, the P.I.F. remained under the orders of the Punjab Government.[46] In 1860, it was involved in military operations in Waziristan which graphically demonstrated its proficiency when, in the space of a fortnight, a column penetrated into the heart of the area and forced the local tribes to agree terms. Although major changes were implemented in the regular Indian army during the 1860s, the organisation of the P.I.F. remained essentially unaltered although the strength of its regiments and their transport was reduced.[47] After the Military Police battalions and levies serving in the Punjab were abolished, Sir N. Chamberlain became responsible for the entire system of border defence in May 1862 outside the confines of the Peshawar District. A new irregular force, the Frontier Militia, was recruited from Pathan tribes on both sides of the administrative border in an endeavour to provide alternative employment to raiding and to enlist local support. Henceforth the line of outposts in the Bannu, Dera Ismail Khan, Dera Ghazi Khan and Rajanpore districts was placed under the control of the commandants of the P.I.F. cavalry regiments while the militia, consisting of 403 horsemen and 217 infantry, garrisoned the intermediate posts either alone or in conjunction with troops. The Frontier Militia provided local knowledge, acted as guides and collected valuable intelligence regarding raids and offences committed by the trans-border tribes which considerably increased the efficiency of the troops in their duties in peace and war.[48]

The efficiency of the P.I.F. was maintained primarily by frequent practical experience combined with the large cadre of seasoned officers and men remaining in its ranks, despite heavy casualties during the Mutiny, who 'passed on' their knowledge of hill warfare to new subalterns, while Indian officers, N.C.O.s and men disseminated their own experience to successive generations of new recruits. Despite its continued specialised role when General Sir Hugh Rose, the Commander-in-Chief, inspected the frontier garrisons

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[46] Maj.-Gen. R.J. Birch, Secretary to the Government of India Military Department, to the Secretary to Government, Punjab, Military Department, 19th Nov. 1860, and Memorandum by Sir John Lawrence that the Punjab Irregular Force should be kept under the Control of Local Government subject to the orders of the Governor General, 8th Dec. 1860, Lawrence Mss, Mss.Eur.F.90/23

[47] General Report on the Administration of the Punjab and its Dependencies, for 1859-60 (Calcutta, 1860), pp.40-1 V/10/13

[48] Annual Report on the Administration of the Punjab Territories, for the year 1861-62, (Calcutta, 1862), p.17 V/10/17

in 1862, however, he was highly critical of the decision to arm its troops with rifles and artillery, the absence of any British troops in the border cantonments, the system of divided responsibility for the defence of the border and the continued independence of the force outside military command. Despite being generally pleased with the drill, discipline and efficiency of the P.I.F., he also pointed out that considerable variations existed in light infantry drill between its regiments.[49] The Lieutenant-Governor once again vigorously defended the P.I.F. pointing out that it was specially organised, trained and equipped solely for hill warfare and that the normal standards applied to the Bengal Army were simply inappropriate while the political exigencies of the frontier necessitated it remaining under local control. With regard to the P.I.F.'s standard of training he observed:

> The men are trained to hill warfare. Regiments are therefore frequently practised on the hill side over difficult ground, which takes away from the time that can be given to battalion and brigade movements, and it is not to be expected that in these, high precision can be attained, nor is it essentially necessary. It may perhaps be doubted if the excellence of the regular and irregular can be combined.[50]

A Standing Order was issued by Brigadier-General Chamberlain on 1st October 1862 which directed that the commanding officer of each infantry regiment should move his troops into camp each year for the purpose of light infantry training on the hill sides. Henceforth training camps were held for a fortnight each year in the hills near each station to accustom the troops to light infantry skills and the special training required during operations over mountainous terrain. In addition, they provided British and Indian officers with the opportunity to organise and control each unit's baggage, equipment, pack transport, and hospital establishments under operational conditions. Practical training was deemed of special importance due to the complex administrative requirements of hill warfare and to

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[49] Report of the Visit of His Excellency the Commander-in-Chief to the Trans-Indus Frontier, 5th July 1862, P/192/17

[50] Minute by the Hon'ble the Lieutenant-Governor of the Punjaub, 3rd Dec. 1862, P/192/17

reduce the amount of transport accompanying the regiments in the field.[51] Training was given added realism when mock fights were held between opposing parts of the regiments, simulating attack, defence and retirements from positions in the hills. Annual inspections of the border outposts, cantonments and each regiment and battery by the commander of the P.I.F. frequently coincided with the light infantry training camps, providing him with an opportunity to assess the performance of his units under simulated active service conditions and to ensue tactical uniformity.[52]

The conduct of mountain warfare on the North-West Frontier did not completely escape professional attention in the regular army during the 1860s. The hastily formed Eusufzye Field Force, which assembled during the autumn of 1863 for punitive operations against the colony of 'Hindustani Fanatics' at Sitana, consisted of 5,000 men and 18 guns and represented the largest force assembled on the North-West Frontier since the First Afghan War. Six P.I.F. infantry regiments, the Queen's Own Corps of Guides and two mountain trains from the Derajat and Kohat garrisons, formed the backbone of the force which was bolstered by two regular British and three Indian regiments. When the force assembled it became apparent that the equipment and transport of the regulars units was inappropriate for the planned operations. Mules and equipment had to be taken from P.I.F. light field batteries to make the Royal Artillery battery effective. As the punitive expedition advanced into the mountains it immediately encountered difficulties as the hastily collected transport, baggage and heavy equipment accompanying the regulars slowed the pace of advance to a crawl.[53] The advance ground to a halt at the Umbeyla Pass when the force was attacked by over 15,000 Swati, Bunerwal and Hindustani tribesmen emboldened by its slow progress through the mountains. It assumed the defensive on 22nd October under continuous and sustained tribal attack, altering the entire plan of campaign and transforming a minor expedition into a major war. Heavy fighting for the possession of Crag Piquet, Eagle's Nest, and Conical Hill, which dominated the position in the Umbeyla Pass, continued for

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[51] Brigade Standing Orders issued by the Brigadier General Commanding Punjab Frontier Force, 6th July 1867, P/436/42

[52] Gen. Sir J.L. Vaughan, My Service in the Indian Army - and After, (London, 1904), p.33 and p.46 and G.W. Forrest, Life of Field Marshal Sir Neville Chamberlain, (London, 1909), p.409

[53] Col. E. Hawthorne to the Secretary Government of India Military Department, 26th Sept. 1863, L/MIL/7/10631 and Forrest, op cit, p.419

two months. Tribal jezails outranged the muskets and Brunswick rifles used by Indian troops and provided effective covering fire to swordsmen utilising the network of ravines, rocks and broken wooded terrain to close and engage in hand-to-hand combat with troops defending the breastworks and sangars blocking the pass.[54] The key to the position, Crag Piquet, changed hands on three occasions, with heavy losses on both sides before it was finally recaptured by Indian troops.[55] Deadlock continued during October and November 1863, focusing the attention of Sir Hugh Rose and the Governor-General on the operations and provoking calls for an ignominious withdrawal back to the plain. After two officers were sent by the Commander-in-Chief to report on the situation, reinforcements were despatched from the regular army which included two British and three Indian regiments.[56] The strengthened Eusufzye Field Force assumed the offensive in November and the destruction of the village of Malka on 22nd December ended the campaign. However, this was after it had suffered 238 killed and 670 wounded, which represented the highest losses ever inflicted on Indian troops during a campaign on the North-West Frontier.[57]

The Umbeyla campaign briefly focused professional attention in the Bengal Army on the requirements of hill warfare and gave regular British and Indian troops practical experience of the inherent difficulties of military operations against a 'savage' tribal opponent in mountainous terrain devoid of roads. Particular criticism was directed towards the standard and type of transport that had accompanied the column. After inspecting the force at Umbeyla Colonel J. Adye noted: 'The great difficulty in moving a force in a country like the present, is the amount of carriage required and the number of Camp followers; and should further operations of the kind be contemplated, this question must be carefully considered and organized.'[58] However, despite proposals to create permanently

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[54] Thorburn, op cit, p.176

[55] Anon.,'Notes on the Late Campaign on the Punjab Frontier', Cornhill Magazine, 9, 51, (1864), p.860 and Col. C.E. Stewart, Through Persia in Disguise with Reminiscences of the Umbeylah Campaign, (London, 1911), p.52

[56] Field Marshal Lord F. Roberts, Forty-One Years in India, (London, 1897), Vol. II pp.9-10 and Gen. J. Adye, Recollections of a Military Life, (London, 1895), pp.207-20

[57] Nevill, op cit, p.62

[58] Extracts from the Reports of Colonel J. Adye to His Excellency General Sir Hugh Rose, Commander-in-Chief India, regarding the position at Umbeyla and the operations of the Eusufzye Field Force, 13th Jan. 1864, L/MIL/3/746

organised transport at Peshawar suitable for operations in the mountains little was done.[59] The military requirements of hill warfare were discussed in several books and lectures. An essay on mountain warfare was published in England in 1866, using examples from the 1816 Gurkha War, the First Afghan War, Umbeyla and European mountain warfare, intended to redress the meagre amount of information on the subject currently available to officers serving in India. Lieutenant C.M. MacGregor recommended that 'everything should be done to raise the efficiency of our own soldiers, by subjecting them beforehand to practice of the style of warfare in which they will soon be engaged, by nerving them gradually to the hardships they will have to undergo, and by equipping them in the manner most suited to the climate and features of the enemy's country.'[60] A further volume, written by the same author, listed the special equipment required by regulars in mountainous terrain. These volumes provided the only source of practical guidance available to British officers regarding the tactics of mountain warfare.[61] The problems inherent in a mountain campaign in India were discussed at length in a book written by Colonel J. Adye, who mirrored Colonel James' earlier views regarding the effectiveness of conventionally organised, trained and equipped Indian troops in mountain warfare:

> Offensive Mountain warfare, in a hostile unknown region, is the prosecution of a difficult art under most trying circumstances. All the ordinary obstructions to successful campaigning present themselves in an aggravated form. Whether in climbing steep ridges, or in forcing rocky defiles, the advantages of ground and the knowledge of locality are in entirely the favour of the enemy. They not only hold the commanding points, but the very habits of their daily life render them particularly adapted to irregular fighting. The well fed soldier of the plains, on the other hand, toiling wearily over the unwanted difficulties of the ground find that the advantages of the regular formations and severe drill are of little avail under conditions

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[59] Memorandum on the Field Carriage and Camp material of the Brigade of Troops in the Peshawur Valley and the Punjaub Irregular Force by Brigadier General A. Wilde, Commanding Punjab Irregular Force, 1st Nov. 1864, P/192/30

[60] Lt. C.M. MacGregor, Mountain Warfare: An Essay on the Conduct of Hill Operations in Mountainous Countries, (London, 1866), p.19 2nd Ed.

[61] Lt. C.M. MacGregor, Field Equipment of Troops for Service among Mountains, (London, 1866)

antagonistic to normal routine. But the difficulties of moving large and regularly organised bodies of men, over a steep and almost pathless country do not end here. The transport for the carriage of food, ammunition, medical stores, and the hundred details which go to meet the almost critical wants of modern armies, render rapid locomotion almost impossible… So that now when we have arrived at the foot of a mountainous tract… our traditional habits, bad enough before, render us peculiarly unfitted to encounter the novel circumstances of the case.[62]

The dearth of appropriate transport was once again singled out for criticism, since it had represented the Achilles heel of the regular army throughout the campaign. Adye concluded by suggesting that British troops should be given experience of hill warfare and that organised transport should be provided for all troops at frontier stations.[63] In April 1867, the attention of the influential Royal United Services Institute in London was brought to the lack of knowledge and appropriate training for mountain warfare in India amongst British officers. Major G.V. Fosbery of the Bengal Staff Corps complained that while the French army had learnt from its service in Algeria, the British Army had ignored 'lessons' gained in India. He observed:

> Comparatively few English officers know what Indian mountain fighting means; the remainder, when brought face to face with a brave, numerous, and formidable enemy, on ground very different from the valleys of Aldershot, or the plains where so many of our triumphs have been won, are apt to find the ordinary regulations, manuals, and drill books less than what is necessary for ordinary success. English courage and English resources eventually win the day, but both courage and resources are often wasted in the winning. True, we have men such as Neville Chamberlain, Reynel Taylor, Wilde, Vaughan, Green, Probyn, Keyes, Brownlow, and others, whose very names are a terror to the tribes with whom we are in contact; but they are so, not merely because they are brilliant soldiers or

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[62] Col. J. Adye, Sitana: A Mountain Campaign on the Borders of Afghanistan in 1863, (London, 1867), pp.34-5
[63] Ibid, p.85 and p.92

> diplomatists, but because they possess special knowledge, not possessed by the rest of our Services; an experience, too, which unhappily dies with them.[64]

Despite the brief period of interest displayed in India and England following the Umbeyla campaign, the P.I.F.'s virtual monopoly on the watch and ward of the remote border of the Punjab remained unchallenged. The knowledge of mountain warfare that had been bought at heavy cost by Indian regiments was soon lost as they returned to the mainstream of professional soldiering in India with its emphasis on instruction for operations against regularly organised trained and equipped European troops.

The P.I.F. maintained a high degree of efficiency during the 1860s and the likelihood of further operations against the Pathan tribes meant its regiments were maintained on a permanent war-footing by the Punjab Government. After the annual inspection in the summer of 1865 its commander reported that drill, parade work and light infantry skills of its units were of a high standard, facilitated by the recent publication of the P.I.F.'s Standing Orders and Chundah rules. In addition, the numerous Brigade Circulars issued by its commanding officers were collated to provide officers with guidance and a means of standardising training in the special duties required in the trans-Indus areas.[65] In September 1865 the P.I.F. was redesignated the Punjab Frontier Force (P.F.F.) after the irregular system was adopted throughout the Indian army, although its organisation remained unaltered.[66] The growing amount of transport and baggage accompanying its regiments into their annual training camps was a particular source of concern to its commander. In an endeavour to maintain its mobility in the border hills a maximum scale of one camel and three mules for each company was laid down by Standing Order in July 1867, with an additional 32 camels to carry regimental stores in the field.[67] The commander of the P.F.F. proposed in September 1867, that manoeuvres should be held for the

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[64] Maj. G.V. Fosbery,'The Umbeyla Expedition', J.R.U.S.I., 11, 46, (1868), p.549
[65] Brig.-Gen. A. Wilde, Commanding Punjaub Irregular Force, to Major S. Black, Secretary to Government, Punjaub Military Department, 17th June 1865, P/192/39
[66] Military Department Letter No. 485 to 1865: General, 7th Nov. 1865, and Col. H.W. Norman, Secretary to the Government of India, Military Department, to the Secretary to Government, Punjaub, Simla, 19th Sept. 1865, L/MIL/3/761
[67] Brigade Standing Orders issued by the Brigadier General Commanding Punjab Frontier Force, 6th July 1867, P/436/42

border garrisons during the coming cold season, to assess their performance in exercises involving all three arms of service and to monitor the amount of baggage accompanying its regiments into the field. Brigadier General A. Wilde observed:

> It has been my desire for some years past to inspect occasionally the troops of this Brigade in "Camps of Exercise," instead of visiting them year by year in cantonments; the object being to enable me to supervise more fully the working condition and saddles of the mounted branches, and the public cattle and camp equipage of the Infantry. It will also give me the opportunity to exercise the Cavalry and Artillery in rough and unknown ground, and to practise the Infantry on the hill side as light troops.[68]

During the winter of 1867-68 Camps of Exercise were held for the garrison of Kohat at Goombut, for the garrisons of Bannu and Dera Ismail Khan at Amakhail and for the garrisons of Dera Ghazi Khan and Rajanpore at the outpost at Harrand. A series of exercises and inspections were conducted at each location directly supervised by the Brigadier-General. The Camps of Exercise were an unqualified success and similar manoeuvres were proposed for the future. Brigadier-General Sir Alfred Wilde concluded: 'I believe the exercising of the troops on the hill side, in parts of the country not often visited by the Officers of the Force, has done good and afforded the younger Officers of Regiments some idea of the difficulties attending all Military operations in mountainous countries.'[69]

The punitive expedition against the Akazais and Hassanzais clans inhabiting the Black Mountain in October-November 1868, consisted primarily of regular British and Indian troops from stations in the Punjab and North-Western Provinces in an endeavour to extended practical experience of hill warfare to the regular Bengal Army and to prevent weakening the border garrisons. The scale of equipment taken by the Indian regiments was deliberately kept at a

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[68] Brig.-Gen. Commanding Punjab Frontier Force, to the Secretary to Government, Punjab, Military Department, 25th Sept. 1867, P/435/44

[69] Brig.-Gen. A. Wilde, Commanding Punjab Frontier Force, to the Secretary to Government, Punjab, Military Department, 24th June 1868, P/435/55

minimum mindful of the earlier experience at the Umbeyla Pass. A Field Force Order, issued at the start of the campaign, laid down: 'The success of all military operations on mountainous countries depends, in a marked degree, on the organization of the Columns employed. The advance of British troops unencumbered with tents or baggage cannot be long checked by the Hill tribes.'[70] However, the dearth of appropriate training and experience in hill warfare amongst the selected regular regiments concerned the commander of the expedition. Major-General Wilde circulated a memorandum in September 1868 to the commanding officers of the regiments and batteries in the Hazara Field Force containing guidance regarding skirmishing, the role of artillery and piqueting when opposed by a tribal opponent.[71] Both brigade commanders were specifically instructed to ascertain that all commanding officers understood the 'spirit of the orders' and to ensure they acted in accordance with them in the field.[72] It was perhaps fortunate that the Hazara Field Force encountered little resistance during the three week long campaign on the Black Mountain although a considerable improvement was evident over prior operations involving regular troops. The reduced scale of baggage and the number of camp followers normally accompanying regular units materially increased their mobility and indicated that regular units were capable of undertaking a hill campaign as long as sufficient preparations were made beforehand.[73] The Commander-in-Chief, enthusiastically observed:

> The spectacle has been seen of British troops, European and Native, operating over and among mountains 10,000 feet high, in bivouac for three weeks… It is placed on record that the English regiments moved as easily and with as little encumbrance as the Native; this fact even extending to the commissariat arrangements for rations. It is further shown that the health of neither English or Native troops suffered in any

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[70] Maj.-Gen. A. Wilde, Commanding Hazara Field Force, to the Q.M.G., 16th Sept. 1868, P/235/57

[71] Maj.-Gen. A. Wilde, Commanding Hazara Field Force, to the Adj.-Gen., 11th Oct. 1868, P/235/57, and Brig.-Gen. A.T. Wilde,'Circular Memorandum for the information and guidance of Officers Commanding Batteries and Regiments, Huzarah Field Force, Sept. 1868, P/615

[72] To Brigadier-Generals Bright and Vaughan, Commanding Nos. 1 &2 Brigades, 28th Sept. 1868, P/615

[73] Maj.-Gen. A. Wilde, Commanding Hazara Field Force, to the Adj.-Gen., 26th Oct. 1868, P/435/58

significant degree… a great lesson has been learnt in mountain warfare which should never be lost sight of in future hill campaigns in India; it being certain that in all such operations, the presence of heavy trains and comparatively useless baggage is more fatal to the initiative of the General in immediate command than any positive resistance it may be in the power of the enemy to offer.[74]

Despite such sanguine views the commander of the Hazara Field Force was less optimistic regarding the lessons of the campaign. In May 1869 Brigadier General A. Wilde submitted a detailed memorandum which outlined the type and quantity of carriage, provisions and equipment required to conduct military operations in the mountains, pointing out that the recent fighting had been hampered by lack of rifled ordnance, four different types of small arms, insufficient equipment adapted to mountain warfare and the absence of organised and armed followers. Although several of these defects were in the process of being rectified, he warned of the tendency to increase the amount of transport and equipment required by imperial troops. Wilde was aware that it was impossible to keep regular troops in a permanent state of readiness for hill warfare due to the expense, but he noted that it would be possible to equip and raise columns within a reasonably short space of time if suitable equipment was kept close at hand. After stressing the importance of transport and supply in hill warfare he suggested that regular transport and trained muleteers, organised on military lines, should be formed on a permanent basis in Peshawar District. Wilde noted:

> I would remark, that the Government cannot expect a permanent peace on the North-West Frontier; encounters with the tribes… will periodically occur, and be successfully met; in the event, however, of the slightest check to our troops, as at Umbeylah in 1863-64, the disturbing influence amongst the fanatical and disaffected inhabitants of our frontier districts makes it a paramount duty in the military advisers of the Government, to be prepared to overcome very formidable combinations. I

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[74] Lt.-Col. P.S. Lumsden, Q.M.G. of the Army, to the Offg. Secretary to the Government of India, Military Department, 5th Nov. 1868, P/435/58

advocate preparedness in equipment and carriage, to enable the Local Government to strike a blow, readily and effectively at the shortest notice, and, at the same time, to have means at hand to move up to the base of operations the necessary supports, without which, no force should ever be permitted to enter the passes, even for a day; … these simple and warlike tribes owe their power of resistance to the nature of their country, and the general absence of centralization, making it often difficult to subdue them at a blow, and rendering it necessary to conquer them man by man. In mountainous countries, regular troops cannot fight in close order, and their superiority is often imperilled by novel positions they find themselves suddenly placed in. My object in writing this letter is to induce Government to adapt our soldiers, by exercise in the hills, and by organization in equipment and carriage, to these new conditions of Indian warfare.

Brigadier-General Sir A. Wilde concluded: 'The North-West Frontier of India, like Algeria and the Caucasus is, as regards the science of war, a field yielding special wants and experience.'[75]

The Hazara campaign did not lead to any serious endeavour to adapt the organisation, equipment and training of the Bengal Army to these 'new conditions' of Indian warfare, apart from prompting an attempt by Sir William Mansfield to absorb the P.F.F. into its ranks. The Commander-in-Chief argued that there was now no difference between the P.F.F.'s duties and that of the regulars and blamed its isolation for the fact that information regarding the tribes, independent territory and the repeated military operations along the border had been lost to the rest of the Indian Army.[76] Although the proposal was supported by Brigadier General A. Wilde, with the proviso that the force would remain localised in the Punjab to maintain its intimate knowledge of the tribes and the border, the suggestion was strongly resisted by the Government of the Punjab who feared the force would lose its distinctive character if it was

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[75] Brig.-Gen. A.T. Wilde, Offg. Military Secretary to the Government Madras, to the Adj.-Gen., 5th May 1869, P/615

[76] Minute by His Excellency General Sir W. Mansfield, 25th Aug. 1869, Keyes Mss, Mss.Eur.D.1048/8

absorbed into the line.[77] The P.F.F. therefore remained a separate unit solely for frontier service under local command. To rectify the dearth of transport suitable for mountain warfare, two permanent mule trains, each consisting of 500 animals with necessary followers and equipment, were formed in November 1868, modelled on the P.F.F.'s regimental transport, as part of the Peshawar and Rawalpindi Moveable Columns.[78] In addition, two Royal Artillery mountain batteries were added permanently to the establishment of the Bengal Presidency in 1869, to give British gunners experience of hill warfare which had hitherto been confined to Indian troops serving in the P.F.F. The 5-25th Brigade, equipped with bronze seven pounder guns, was the first Royal Artillery battery deployed on the North-West Frontier when it was stationed at Abbottabad in 1869.[79]

The 1870-71 Franco-Prussian War diverted attention in India from local military requirements of mountain warfare and directed it towards the study of strategy and tactics used against similarly equipped, organised and trained European troops. At the camps of exercise held at Dehli and Hussan Abdal in 1872-73 the new system of conventional warfare was studied by Indian troops.[80] The 'Prussianisation' of the drill books, used by both the British and Indian troops, after 1870 dominated training in both India and England and diverted professional attention back to conventional military operations to the exclusion of all other forms of warfare.[81] The blame attributed to Algerian military experience for the defeat of the French Army in 1870, moreover, devalued the perceived importance of the lessons derived from imperial military campaigns. An anonymous author writing for the influential Wellington Prize Essay competition in 1872, mirrored the similar views within the British Army, observing: 'The service which our soldiers have seen in India, or China, or New Zealand, will not stand them in much stead;

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[77] Memorandum by Brigadier-General A.T. Wilde, 17th April 1869, and Major S. Black, Secretary to Government, Punjab, to Maj.-Gen. H.W. Norman, Secretary to Government of India, Military Department, 19th March 1870, Keyes Mss, Mss.Eur.D.1048/8

[78] Maj.-Gen. H.W. Norman, Secretary to the Government of India, Military Department, to the Offg. Commissary General, 20th April 1869, P/436/4 and Executive Commissariat Officer, Peshawur, to Lt.-Col. T.H. Sibley, Deputy Commissary General, Upper Circle, 2nd April 1872, P/620

[79] Military Department Despatch No. 434 of 1868: Decision to maintain two Mountain Batteries in the Bengal Presidency, 7th Nov. 1868, L/MIL/3/788

[80] Maj.-Gen. P.S. Lumsden, Q.M.G, to the Secretary to the Government of India, Military Department, 16th Jan. 1873, L/MIL/3/833 and "Beechwood", My Diary of the Punjab Camp of Exercise, 1872-73, (Bombay, 1873)

[81] Brig.-Gen. C.H. Brownlow, 'Notes on the Native Army of Bengal: Its present material and organisation, as compared with the past', Sept. 1875, L/MIL/17/2/468

the lessons gathered in such warfare, unless read with great intelligence, might prove rather the reverse of useful, just as the Algerian experience, there is reason to believe, was positively injurious to the French army.'[82] Sir Robert Napier introduced new systems of drill and training in the Indian army, modelled on the Prussian system, revolutionising its training during the 1870s which emphasised musketry, attacks by infantry swarms and the use of skirmishers.[83] In many ways the skirmishing tactics that now dominated training were similar to the tactics developed by the P.F.F. for military operations against the border tribes. General L. Vaughan noted: 'When many years later the Franco-Prussian war came and the world - surprised by the great superiority of the German troops - inquired how it was brought about, we on the frontier smiled to find how, by the use of a bit of common sense and freedom from red tape, we had anticipated a great deal of what was best in the German system of training.'[84] Both the standard training manuals used by British and Indian troops, the *Field Services and Exercises of Infantry*, and the various unofficial books used for instruction focused on the lessons drawn from continental military practice under conditions far different from the requirements of warfare in India.[85] The new in-house periodical of the Indian Army, the *Journal of the United Services Institute of India* (J.U.S.I.I.), reflected the emphasis now placed on the lessons of European warfare. Few articles even mentioned colonial military requirements and failed to have a impact in increasing awareness of the general requirements of fighting in the British Empire. Although several pieces of literature were published addressing the conduct of mountain warfare for regular troops engaged in operations on the North-West Frontier, they had limited impact on the mainstream of military thought in India.[86]

The watch and ward of the administrative border was left primarily in the hands of the P.F.F. during the 1870s, apart from the comparatively small and ever-changing garrison of Peshawar District,

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[82] By an Adjutant, An Essay on Tactics, (London, 1872), p.4

[83] Maj.-Gen. H.W. Norman,'Memorandum on the Native Army,' 13th Jan. 1875, L/MIL/17/5/1670

[84] Vaughan, op cit, p.46

[85] See Field Exercises and Evolutions of Infantry, (London, 1874), E.B. Hamley, Operations of War, (London, 1866), and Capt. C. Clery, Minor Tactics, (London, 1875)

[86] See Lt. A. Gaselee,'On the Carriage of Ammunition in Mountain Warfare', J.U.S.I.I., 1, 3, (1871), p.102, and Maj.-Gen. L. Shadwell, Mountain Warfare: Illustrated by the Campaign of 1799 in Switzerland, (London, 1875)

despite growing fears that the security of India was threatened from Afghanistan and beyond. By 1870 its strength had grown to that of a large division of all-arms, despite being classified as a brigade command, consisting of 12 regiments of infantry, five of cavalry, four light field batteries, two mountain batteries, and one garrison battery and the attached Frontier Militia.[87] The P.F.F.'s units were among the first in India to be issued with modern rifled arms, dramatically increasing their effectiveness and giving them a qualitative advantage in armament over the tribes for the first time. Both the Peshawar and Hazara mountain batteries were re-equipped during 1869 with bronze seven pounder rifled mountain guns with greatly improved range and accuracy, while four guns and their equipment were placed in store at Kohat for the Light Field Batteries which retained smoothbore guns.[88] The two remaining Light Field Batteries were finally equipped with 2001b steel seven-pounder muzzle-loading rifled mountain guns in November 1876 and were permanently redesignated as mountain batteries.[89] Infantry regiments in the P.F.F. were given muzzle-loading Enfield rifles between 1869-71 with greatly superior range to their current small arms.[90] Three years later Indian units stationed at Peshawar, Nowshera, Kohat, and Mardan were re-equipped with single-shot breech-loading Snider rifles which had a greatly increased rate of fire and accuracy.[91]

The number of punitive military expeditions carried out by the P.F.F. declined during the 1870s, as relations between the independent tribes and the imperial authorities steadily improved. After a reorganisation in 1873-4 the militia and civil police performed many of the duties hitherto carried out by its cavalry and

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[87] Brig.-Gen. C.P. Keyes, Commanding Punjab Frontier Force, to Lt.-Col. S. Black, Secretary to Government, Punjab, Military Department, 7th Nov. 1870, P/620

[88] Military Department Separate Letter No. 349 of 1869: On the subject of army reduction, 4th Oct. 1869, L/MIL/3/102, and Maj.-Gen. F. Turner, Inspector General of Ordnance & Magazines, to the Secretary to the Government of India, Military Department, 9th Oct. 1868, L/MIL/3/833

[89] Col. S. Black, Secretary to Government, Punjab, Military Department, to Col. H.K. Burne, Secretary to the Government of India, Military Department, 3rd Aug. 1877 L/MIL/3/876 and Brig.-Gen. C.P. Keyes, Commanding Punjab Frontier Force, to Col. S. Black, Secretary to Government, Punjab, Military Department, 13th Nov. 1876, P/951

[90] Military Department Separate Letter No. 183 of 1870: Reporting the arming of certain Native Regiments with the Enfield Rifles, 15th July 1870, L/MIL/3/104 and Memorandum from Brig.-Gen. C.P. Keyes, Commanding Punjab Frontier Force, to Captain C.S. McLean, Offg. Secretary to Government, Punjab, Military Department, 22nd Sept. 1871, P/608

[91] Military Department Letter No. 147 of 1874: Reporting the measures taken for the commencing to arm the Native Troops with breech-loading arms, 1st Aug. 1874, L/MIL/3/844

infantry regiments. As a result, troops were withdrawn from outposts and concentrated at cantonments where they were held in immediate readiness to respond to any major tribal incursions.[92] The training and garrison duties carried out by the P.F.F. increasingly differed in few respects from those performed by the line army and the force slowly began to lose the distinctive 'rough and ready' character that had hitherto differentiated its regiments from the Bengal Army.[93] After the annual inspection in 1872 the commander, Brigadier General C.P. Keyes, complained that its commandants paid too much attention to the drills laid down in the battalion exercise and smartness, rather than to the 'essential qualities requisite for the special service of the Frontier.'[94] As a result during the 1870s the P.F.F. continued to carry out annual training camps nearby their cantonments to exercise their pack transport and practise light infantry skills required in hill warfare.[95] A Camp of Exercise was held at Paniala, for example, by Brigadier-General C.P. Keyes during January-February 1874, for the garrisons at Dera Ismail Khan and Edwardesbad during which simulated attacks on and the defence of mountain passes were carried out.[96] After the manoeuvres Sir Henry Davies, the Governor of the Punjab, once again endorsed the system of practical training and urged that similar manoeuvres should be carried out in future.[97] Instruction of officers was also facilitated by the publication of a detailed official history of prior frontier expeditions, written by Colonel W.H. Paget, Commandant of the 5th Punjab Cavalry, with information 'as might render the work a valuable guide to those who might have future dealings with those turbulent neighbours.' This survey was, unfortunately, little more than a dry narrative of earlier campaigns. It did little to collate practical lessons for British officers serving either in the P.F.F. or the regular army,

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[92] Brig.-Gen. C.P. Keyes, Commanding Punjab Frontier Force, to Offg. Secretary to Government, Punjab, Military Department, 17th Feb. 1873, P/958, and Lepel Griffin, Offg. Secretary to Government, Punjab, to the Secretary to the Government of India, Foreign Department, 28th Feb. 1873, P/958

[93] J.M. Ewart and E. Howell, Story of the North-West Frontier Province, (Peshawar, 1930), p.13

[94] Brig.-Gen. C.P. Keyes, Commanding Punjab Frontier Force, to the Secretary to Government, Punjab, Military Department, 19th Oct. 1872, L/MIL/3/831

[95] Maj. G.A. Furse, Studies on Military Transport, (Bombay, 1877), p.38

[96] The Historical records, the 3rd Sikh Infantry, Punjab Frontier Force, (No Imprint: 1903), p.33, History of the 1st Sikh Infantry, 1846-1886, (Calcutta, 1903), pp.90-1 and History of the Second Panjáb Cavalry, (London, 1888), p.26

[97] Lt.-Col. S. Black, Secretary to Government, Punjab, Military Dept. to Col. H.K. Burne, Secretary to the Government of India, Military Department, Murree, 8th Aug. 1874, L/MIL/3/847

except for the publication of extracts from orders issued by Brigadier-General Chamberlain.[98] After Brigadier-General Keyes held a further Camp of Exercise at Zam, near the cantonment at Dera Ismail Khan, in March 1876, the Military Secretary to the Punjab Government noted:

> In carrying out the inspections of Regiments at Dera Ismail Khan, Brigadier-General Keyes was enabled to give these regiments some practical working and exercise in the hills, in front of that station; and the Lieutenant-Governor is glad to observe that there is evidence of much good in these exercises over broken and hilly ground. So much time is now taken up in musketry and other duties, which confine the troops to their cantonments, that the Lieutenant Governor is afraid the important and essential duty of teaching regiments how to face an enemy on the hill side, has in a great measure to be set aside… much of the efficiency of the force depends on this kind of training; and he thinks, that whenever the musketry course has finished, no economy ought to be allowed to stand in the way of giving to each regiment and battery some exercise in the hills, under the guidance of the Brigadier-General Commanding. Indeed… the special character of the force cannot be maintained without it.[99]

When the P.F.F.'s mountain batteries were ordered to submit training reports similar to those supplied by regular Royal Artillery batteries in India and to standardise training, the Punjab Government vigorously defended its system of practical, varied training carried out throughout the year which differed radically from the stereotyped methods used by the regular gunners.[100]

The Jowaki Afridis provided the P.F.F. and the regular garrison of Peshawar District with a practical opportunity during the winter of 1877-78 to assess the effectiveness of their training, breech-

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[98] Lt.-Col. W.H. Paget, Expeditions versus the North West Frontier Tribes, (Calcutta, 1874), pp.451-3

[99] Col. S. Black, Secretary to Government, Punjab, Military Department, to Col. H.K. Burne, Secretary to the Government of India, Military Department, 15th Sept. 1876, P/951

[100] Brig.-Gen. C.P. Keyes, Commanding Punjab Frontier Force, to the Secretary to Government, Punjab, Military Department, 14th July 1877 and Col. S. Black, Secretary to Government, Punjab, Military Department, to Col. H.K. Burne, Secretary to Government of India, Military Department, 3rd Aug. 1877, P/1181

loading small arms and modern rifled mountain, field and heavy artillery in hill warfare. It became immediately clear that the Snider and Martini-Henry loading rifles and modern rifled artillery conferred a decisive technological advantage. Throughout the operations Indian columns brushed away large Afridi lashkars with comparative ease and moved at will through the hills meeting only desultory resistance.[101] After suffering heavy casualties the Jowakis learnt not to oppose Indian troops en masse and reverted to hit-and-run tactics and long range rifle fire using a handful of captured Enfields.[102] Following the fighting on 8th December, Brigadier-General C.C. Ross noted: 'The Afridis appear to have found that their traditional tactics were absolutely useless against the arms and disciplined soldiers opposed to them, and with the exception of a few individuals, none of them on this occasion attempted to hold their ground or fire upon our men during their retreat.'[103] Nine-pounder field guns, carried by elephants, supplemented the mountain batteries during fighting in the Bori valley. The rifled artillery firing from positions on the Shergadra ridge forced the tribesmen to abandon strong defensive positions and covered parties of infantry destroying villages and towers in the area. Major-General Frederick Roberts observed: 'The accurate and long-ranging fire of the 9-pounders was of great assistance in this duty, and totally prevented the Afridis from following up our parties when retiring. Thus one of the principal dangers of this warfare was totally eliminated, and at the close of each day's operations 'the troops retired to the Shergasha exactly as if on parade.'[104] A total of only 11 killed and 50 wounded were suffered by imperial troops throughout the campaign which had been completely successful. After the campaign Colonel S. Black, Military Secretary to the Punjab Government, observed:

> Throughout the operations our troops were able to move without serious opposition over the enemy's hills, which are extremely

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[101] Report on the Administration of the Punjab and its Dependencies for the year 1877-78, (Lahore, 1878), pp.13-4 V/10/335

[102] Capt. E. Walsh,'Mountain Guns for Indian Frontier Service', Proc. R.A.I., 11, (1881), p.34 and Maj.-Gen. F. Howard, Reminiscences 1848-1890, (London, 1924), p.254

[103] Brig.-Gen. C.C. Ross, Commanding Field Force Peshawar District, to Q.M.G., 21st Dec. 1877, L/MIL/7/15379

[104] Maj.-Gen. F. Roberts 'A short account of the operations carried out against the Jowaki section of the Adam Kheyl Afridis' 8th Feb. 1878, L/MIL/7/15378

rugged and difficult. This is the first time that a force armed with breech-loading arms has been employed in any hill expedition, and the results obtained prove most conclusively that the coercion of any hill tribe is now a matter of comparative ease and certainty. Our own troops have gained confidence in their weapons, whilst not only the Jowakis, but the whole Afridi tribe, now know that they cannot safely venture within range of our rifles, which carry so much further than their own weapons.[105]

Such views were supported by other officers who agreed that rifled 'arms of precision' and mountain, field and heavy artillery had important implications for infantry tactics, the composition and size of columns required for operations in the border hills. Captain J.M. Trotter concluded: 'It seems probable that two compact brigades of thoroughly disciplined infantry, armed with breech loading rifles and with a strong proportion of artillery will always be found at least as efficient for service against the Afridis as a whole Corps d'armée.'[106] Indeed, modern rifles largely compensated for the lack of knowledge of the specialised tactics of hill warfare amongst the regular troops employed in the Bori Valley, and also counterbalanced the strategic inferiority they suffered when operating in tribal territory in terms of intelligence, immunity to disease and transport and supply difficulties.[107]

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[105] Col. S. Black, Secretary to Government, Punjab, Military Department to Col. H.K. Burne, Secretary to the Government of India, Military Department, 25th April 1878, L/MIL/7/15379

[106] Capt. J.M. Trotter,'Narrative of the Jawaki Campaign', J.U.S.I.I., 7, 31, (1878), p.49

[107] H. Strachan, From Waterloo to Balaclava: Tactics, Technology and the British Army 1815-1854, (Cambridge, 1985), p.54

Chapter Two
The Indian Army and Mountain Warfare
November 1878 - April 1898

The Second Afghan War introduced a large part of the Indian Army to the operational and tactical exigencies of mountain warfare against a tribal opponent. The extended fighting in the bleak, treeless and precipitous hills of Afghanistan and along the lines of communication through tribal territory, in 1878 and 1879-80, was very different from those conditions envisaged in the standard military text-books on which training in India had hitherto been based.[1] Despite recent claims, it is simply incorrect to suggest that the regular Indian Army had an authoritative doctrine or system of training for mountain warfare at the outbreak of the war, although, as already noted, a code of tactics and body of experience had been devised and refined by the P.F.F. since 1849.[2] Although information relating to the conduct of hill warfare was circulated within the P.F.F. and passed on informally within its units by means of an 'oral tradition' it was never published outside its regiments or batteries or made readily available to British and Indian regulars stationed in either Peshawar District or the northern Punjab. The reasons for the failure to disseminate such information are not hard to find. As the P.F.F. was retained under the independent administrative control of the Punjab Government, rather than the military authorities, the force was not responsible for the circulation of tactical information beyond the few regulars that accompanied it on active service. The small scale of the early military expeditions against the trans-border tribes and the remoteness of tribal territory are also responsible. Initially, reports of frontier expeditions were not circulated beyond the Punjab Government which meant the regular army lacked any information regarding tribal territory. As long as P.F.F. units could cope with fighting the frontier tribesmen with limited outside assistance, there was simply no need to develop a tactical doctrine for training the rest of the British and Indian armies. The

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[1] See Afghan Campaign, 1879-80, 1st Feb. 1881, L/MIL/17/14/28 and The Second Afghan War: Compiled and collated under the orders of Major-Genl. Sir C.M. MacGregor, (Simla, 1885), 6 Vols.

[2] B. Robson, The Road to Kabul: The Second Afghan War, 1878-1881, (London, 1986), p.66. See also B. Robson, Roberts in India The Military Papers of Field Marshal Lord Roberts 1876-1893, (London, 1993) p.4

systems of reliefs, moreover, prevented regular units gaining sustained experience or building up a cadre of trained officers, N.C.O.s or men with personal knowledge of mountain warfare, trans-border Pathans and the border hills. As a result of these factors the experience and lessons learnt from fighting on the North-West Frontier remained locked in the minds of individual officers who had served along the border, or scattered and in the pages of memoirs usually unavailable to officers serving in the area or to the regular army as a whole in any systematic form.

The P.F.F.'s regiments and batteries formed a large part of the troops deployed in Afghanistan. A total of four mountain batteries, three cavalry regiments, four infantry regiments and the Corps of Guides being placed under the command of the military authorities by the Government of the Punjab when hostilities broke out. Throughout the two campaigns, heavy reliance was placed on these highly trained and experienced units, whose equipment and training was ideally suited to operations in mountainous terrain and whose proficiency in hill warfare was widely acknowledged.[3] For example, they formed a large proportion of Major General F.S. Roberts' Kurram Field Force when it advanced towards the Peiwar Kotal at the beginning of the campaign. Although many officers and men in the Bengal Army had some personal experience of hill warfare during service alongside the P.F.F., relevant information had only been disseminated in an ad hoc manner by word of mouth to the rest of the army. Apart from the British mountain batteries and the current garrison of Peshawar District, who had participated in the recent Jowaki and Utman Khel operations, the majority of British and Indian regiments from stations on the plains were composed of inexperienced and untrained men who knew little of mountain warfare and lacked sufficient equipment or means of transport adapted to service in the North-West Frontier. At the beginning of the campaign, only two mule trains and eight mountain batteries - two British and six native - existed that were specifically organised, trained and equipped for operations in mountainous terrain. These were clearly insufficient for the scale of the extended operations undertaken by the Indian Army in

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[3] Surgeon-Major J.H. Evatt,'Personal Recollections of the Afghan Campaigns of 1878-79-80', J.U.S.I.I., 19, 82, (1890), p.305

Afghanistan.[4] Those units without experience had to learn the rudiments of mountain warfare while on active service or else rely on the training given at the discretion of individual commanders. For example, before the attack on Ali Masjid, Major-General Sir Sam Browne, a P.F.F. officer, circulated a memorandum to the 1st Division at Peshawar outlining methods for an attack on a position, an advance in the hills, piqueting, skirmishing tactics and musketry against dispersed tribal lashkars on the mountain sides.[5]

The Second Afghan War demonstrated to regular Anglo-Indian troops that the tactics and training devised for European conditions were unsuitable when employed against a 'semi-civilised' opponent.[6] As Lieutenant M. Martin critically observed: 'The study of tactics in India is generally conducted (longo intervallo) after the European or Prussian model, i.e. it assumes an enemy possessing breech-loading arms… It is hardly necessary to say this was not the practical experience of the Afghan campaign.'[7] Indeed, in many ways the Afghan war was simply another punitive hill campaign on a large scale during which orthodox European tactics gave way progressively to those more suited to 'savage warfare', although to some extent the initial operations against regular Afghan troops did conform more to conventional warfare.[8] Following the fighting at Ali Musjid and the Peiwar Kotal, however, the rapid dissolution of the regular Afghan army meant that the invading Indian columns were opposed by irregular and poorly armed tribal levies against which advanced tactical formations, derived from the experience of facing breech-loader rifles in Europe, were clearly inappropriate. As a result of the terrain and the tactics used by Afghan regular and irregular troops the brunt of the fighting in tribal territory and Afghanistan fell on the infantry.[9] The decisive technological superiority enjoyed by Indian troops equipped with 'arms of precision' compensated for the

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[4] Col. H.B. Hanna, The Second Afghan War, 1878-79-80: Its Causes, Its Conduct, and Its Consequences, (Westminster, 1899), Vol. 1 pp.271-8

[5] Memoranda for the Guidance of the Peshawar Field Force by order of Lieut.-General Sir Sam Browne, Commanding 1st Division, 17th Nov. 1878, Browne Mss, N.A.M. 7703-49-5

[6] R. Gillham-Thomsett, Kohât, Kuram, and Khost; or, Experiences and Adventures in the Late Afghan War, (London, 1884), pp.96-7

[7] Lt. M. Martin, 'Tactics in the Afghan Campaign', J.U.S.I.I., 10, 47, (1882), p.1

[8] Maj. J.H. Crowe, An Epitome of the Afghan War, 1878-9 and 1879-80, (Woolwich, 1905), p.26

[9] Lt.-Col. G.T. Pretyman,'Rough Notes on the Kabul-Kandahar March of August, 1880', Proc. R.A.I., 12, (1884), p.5

strategic superiority in terms of supply and communications enjoyed by the Afghan irregulars. Martini-Henry and Snider breech-loading rifles and rifled mountain, field and heavy artillery enabled the numerically inferior columns of imperial troops to brush away vastly superior numbers of tribesmen and to inflict massive casualties. Lieutenant C.G. Robertson observed:

> The tables have been turned since the days when the deadly jezails used to harass our men, who were powerless to reply. The change is dead against all accepted rules of tactics in Afghanistan. If a Pathan can crouch behind a rock and shoot you in safety, he enjoys himself amazingly; but he hates risk, and of there is any chance of your shooting him instead, the sport is entirely spoiled in his eyes.[10]

Skirmishing was placed at a premium on the Afghan mountain sides. The skirmishing tactics which had been devised for use against European troops, armed with breech-loading rifles and artillery, proved of some relevance during the fragmented and dispersed fighting on the hill sides which occurred as British and Indian the troops moved forward to assault successive positions. A combination of frontal offensives, flank attacks and turning movements successfully cleared Afghan regular and irregular troops from out of their defensive positions in the mountains. Imperial troops also learnt in Afghanistan that thin and dispersed formations were suited to military operations in the hills. It proved difficult, however, to exercise effective command or control of the dispersed Indian troops on the hill sides and few Indian officers possessed sufficient initiative or skill to fight effectively in small detachments out of the direct control of British officers. Some of the inherent problems of hill warfare were revealed during the attack on the Peiwar Kotal. Major J.A. Colquhoun observed: 'A line of skirmishers extended in a pine wood over a rocky hillside is soon lost to the view, nor can the officers do much as regards its superintendence, when, excepting those close to hand, their men cannot be seen. Fighting under these circumstances becomes a series of hand-to-hand combats. Numbers do

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[10] Lt. C.G. Robertson, Kurum, Kabul & Kandahar Being a Brief Account Record of Impressions in Three Campaigns under General Roberts, (Edinburgh, 1881), p.170

not tell at first; afterwards, of course, the advance must be on the side of the troops who can pour the larger force in succession into a given position.'[11] Attacks by imperial troops were therefore prone to fall into disarray as they became strung out on the mountain sides, out of control of their officers and the thin skirmishing lines were in turn vulnerable to counter-attacks by Afghan swordsmen. All too often such advancing troops masked the fire of their own comrades moving up in support.[12] Light infantry drill was of vital importance throughout the campaign as small parties of infantry advanced in small rushes exploiting every scrap of cover during attacks.[13]

The Afghan tribesmen, although deprived of modern firearms and artillery, were still formidable opponents and relied heavily on shock tactics supported with, often ineffective, rifle and jezail fire against British and Indian troops. It was, however, found to be impracticable to maintain Indian troops in extended skirmishing order, which lacked sufficient solidity or cohesion to meet charges made by swordsmen en masse. Such tactics therefore dictated the formations that had to be employed by imperial troops.[14] Close order formations proved essential to maintain morale and ensure the development of sufficiently intense rifle fire to halt attacks. For example, at Ahmed Khel, British and Indian troops deploying into an extended attack formation for an attack on a strong defensive position, were charged by cavalry and thousands of Ghazi swordsmen and Sir Donald Stewart's force only narrowly escaped defeat when a line formation was improvised, rallying squares were formed by the reserves and both heavy and field artillery were hurriedly committed to the battle. An estimated 2,000 dead and wounded Afghan tribesmen were left on the battlefield following the engagement, whilst British casualties only amounted to 17 killed and 124 wounded.[15] However, not all the operations during the campaign were so one-sided. At Maiwand on 27th July 1880, for example, the tables were turned when Afghan regulars and irregulars led by Ayub Khan inflicted a decisive defeat

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[11] Maj. J.A. Colquhoun, With the Kurrum Field Force, (London, 1881), p.110

[12] Capt. C.B. Mayne, Infantry Fire Tactics, (Chatham, 1885), pp.390-1

[13] Maj. R.C. Mitford, To Cabul with the Cavalry Brigade, (London, 1881), 2nd ed. p.25

[14] Col. T.L. Bell,'The Offensive-Defensive by Infantry in Extended Order', J.R.U.S.I. 25, 109, (1881), p.157 and Martin op cit, p.2

[15] Capt. R. Elias, 'A Streak of the Afghan War - Lieutenant General Sir Donald Stewart's March from Kandahar to Ghazni: with actions of Ahmed Khel and Urzu,' J.R.U.S.I. 24, 107, (1880), pp.670-1 and Maj. E.S. May, Achievements of Field Artillery, (Woolwich, 1893), pp.144-51

on a poorly handled brigade of Indian troops.[16] It became apparent that the best formation opposed to masses of swordsmen, intent on hand-to-hand fighting, was the adoption of the close-order shoulder-to-shoulder line, which allowed the maximum development of fire and gave sufficient solidity to the ranks to receive a massed attack. For one officer this seemed to herald a return to the line, '… the old formation so dear to British arms,' as perhaps best suited for mountain warfare against a 'savage' opponent rather than the dispersed skirmishing formations which had been laid down in the training manuals in the aftermath of the Franco-Prussian War.[17] Several other officers who had served in Afghanistan concurred with this observation: 'In a serious engagement with determined swordsmen, and under no crushing fire, it does not appear that the fighting line is best disposed in skirmishing order. On the contrary such lines are out of hand and unsteady. Companies become mixed and all control is sometimes lost.'[18]

The Second Afghan War confirmed many of the lessons that had been learnt by the P.F.F. and the mountain artillery since 1849, with regard to offensive tactics and the importance of piquets, perimeter camps and skirmishing. Moreover it acquainted many British officers with the special conditions and requirements of warfare in mountainous terrain for the first time. Throughout the fighting, P.F.F. regiments and batteries demonstrated their effectiveness in mountain warfare, refuting accusations that the efficiency of the force had declined during the 1870s. The Government of the Punjab concluded in 1879: 'The records of the two Kabul campaigns show conclusively, and the fact is acknowledged by every military authority of position, that the best troops for work in mountainous country like Afghanistan, are those which have been accustomed throughout their service to military duties on the border.'[19]

During the war, the British and Indian mountain artillery batteries had been heavily employed as they represented the only type of ordnance capable of operating in the mountains, other than on the Kandahar line where field and heavy artillery was also employed.

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[16] B. Robson, 'Maiwand, 27th July 1880', J.S.A.H.R., 51, (1973), pp.194-221 and

[17] Capt. C. Hoskyns,'A Short Narrative of the Afghan Campaigns of 1879-80-81 from an Engineer's Point of View', J.R.U.S.I., 26, 116, (1882), p.442

[18] Martin, op cit, p.4

[19] Report on the Administration of the Punjab and its Dependencies for 1878-79, (Lahore, 1879), pp.22-3 V/10/336

General Roberts' decision to accompany the force sent from Kabul to relieve Kandahar in August 1880 with only mountain batteries, had attracted considerable public and professional interest both in England and India and brought the gunners into prominence.[20] During the war their effectiveness was increased when at Zawa, in the Kurram Valley, 2.5" screw-guns were used for the first time in India, adding to the technological superiority enjoyed by British arms.[21] Two mountain batteries were added to the regular Indian establishment after the war increasing the number to six permanent British mountain batteries stationed in India.[22] A manual of mountain artillery drill was published in India for the first time in 1882, although it contained a meagre amount of tactical information for officers new to operations against the trans-border Pathan tribes and concentrated more on the interior economy of the mountain artillery batteries and technical questions.[23]

The tactical lessons of the Second Afghan War for the regular army were, however, mixed and often contradictory. While the skirmishing tactics devised for European warfare were vindicated, they had been frequently discarded by British officers for close order formations to meet massed attacks by Afghan swordsmen. To a limited extent, however, the war had lessened the impact of European military thought in India, by exposing the limitations of conventional tactics in mountainous terrain against opponents reliant on hand-to-hand combat. It also stimulated a growing realisation that the tactics and arms of an opponent had to be taken into account in addition to the terrain when determining suitable tactics. It did not provide a catalyst, however, for the development and dissemination of tactics and appropriate training for hill warfare throughout the British or Indian armies, whose focus remained based on those skills required in conventional military operations. Nevertheless, officers and men in a large number of regiments, especially those in the

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[20] Roberts, op cit, p.344, Pretyman, op cit, pp.5-6 and Lt.-Col. E.F. Chapman,'The March from Kabul to Kandahar in August and the Battle of the 1st September,' J.R.U.S.I. 25, 111, (1881), p.286

[21] Capt. G.T. Carré,'Zaimukht Expedition, under Brigadier-General J.A. Tyler', Proc. R.A.I., 11, (1881), pp.399-402

[22] Military Department Despatch No. 141 of 1881: Recommendations in regard to the strength of the European troops in India, with reference to the proposals of the Indian Army Commission, 24th April 1881, L/MIL/7/10100 and Maj.-Gen. C.E. Callwell and Maj.-Gen. J. Headlam, A History of the Royal Artillery from the Indian Mutiny to the Great War, (Woolwich, 1937), pp.263-4

[23] Manual of Mountain Artillery Drill, (Simla, 1882)

Bengal Army, had now gained practical experience of military operations against the trans-border tribes. The 'lessons' of the Second Afghan War tended to be viewed solely by the military authorities in terms of their relevance to conventional military operations. Several officers quickly reminded their peers who had fought in imperial campaigns that the adoption of close order formations was an aberration and potentially disastrous in the face of breech-loading rifles.[24] The example of the French Army in Algeria and the events of 1870-71 were still fresh in the minds of British officers. Lieutenant M. Martin summed up the consensus of opinion in India:

> It seems unlikely that many hints can be gained from our late experience which would be useful to us in any European struggle, and further, that our late practice should be conscientiously studied least we may haplessly engraft the faults of self confidence into a system which is very far from perfection. It is then hardly in the political, strategical or tactical aspects that much practical information can be added to our knowledge, but rather in the perfection of the organisation, equipment and use of the several combatant arms and subsidiary departments.[25]

As a result, the tactical lessons learned were discounted in India. General Sir O. Cavenagh noted in 1882: 'If the Indian Army is to prove a source of strength instead of weakness to the Empire, it must be prepared to meet the best troops of civilized Europe, for the struggle to check the invasion of Hindustan may take place in Egypt or in Asia Minor.'[26] No sooner had troops arrived back in India than their attention became focused, once again, on preparing to meet a 'civilized' opponent as the perception of a Russian threat to the security of British Indian steadily increased. Further factors also explained the failure to disseminate a doctrine for mountain warfare in the aftermath of the Second Afghan War. The marked superiority of the 'arms of precision' used by the British and Indian troops masked

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[24] Bell, op cit, pp.157-8
[25] Lt. M. Martin,'Notes on the Operations in the Kurrum Valley, 1878-79', J.U.S.I.I., 10, 47, (1881), p.7
[26] Gen. Sir O. Cavenagh,'Our Indian Army', J.R.U.S.I., 26, 48, (1882), p.763

the need to develop specific training adapted to warfare against tribal opponents. In addition, the number and scale of frontier campaigns decreased during the early 1880s, doing little to encourage the dissemination of appropriate tactics to the rest of the Indian Army.

The Second Afghan War and a series of other 'small wars' fought by British troops in Africa since 1879 stimulated a growing awareness of the distinct general requirements of colonial warfare. Several officers who had served during these campaigns questioned the emphasis placed on conventional European warfare in training as it was clearly apparent that the tactics and attack formations laid down in the training manuals were either completely inapplicable or required considerable modification to meet the altered conditions of colonial warfare. An examination of the military requirements of colonial warfare was spurred on by the defeats at Isandhlwana and Maiwand. In an essay published in the *Professional Papers of the Corps of Royal Engineers* in 1881, Lieutenant R. de Costa Porter noted:

> To attempt to reduce to a rule campaigns that have been, and yet may be, carried on against our numerous uncivilised neighbours, would prove a hopeless task, each new campaign as it is fought exposes our gaze to a new form of warfare, and the experience gained by our predecessors is but partially applicable to ourselves. The strategy of an Afghan campaign must differ from that of the New Zealand War; the tactics suited for the bush fighting of Ashanti would not be suitable for the open plains of Ulundi. Each campaign that we have fought has a character all its own… But as much as our past savage wars must differ from each other, there are certain points of common resemblance, certain main principles run through them all, which may service as guides in future cases. These it may be worth while to note, to underline as it were, and bring into proper prominence.[27]

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[27] Lt. R. de C. Porter,'Warfare against Uncivilised Races; or, How to fight Greatly Superior Forces of an Uncivilised and Badly-Armed Enemy', P.P.R.E., 15, (1881), pp.305-60

A series of articles were published in the English service press during the early 1880s discussing the conduct of what was increasingly referred to as 'savage warfare', reflecting a growing realisation that appropriate training should be devised and implemented during peacetime to meet Britain's imperial commitments.[28] The square became widely accepted as an authoritative battle formation against opponents reliant on shock tactics and hand-to-hand combat, after it was used repeatedly in South Africa and in the Soudan by British troops. However, a reversion to such an outdated tactic, long abandoned in European warfare, provoked an extended debate in the service press in England which revealed a wide diversity of opinion regarding the conduct of colonial warfare and a growing realisation that Britain's military obligations differed from those of other continental powers. Sir P.L. MacDougall, a prominent military theorist, condemned the close-order formations that had been adopted by British troops to combat 'savage' opponents, notwithstanding the dramatic improvements in firearms. Writing in 1884, he advocated a return to the line formation in the British army in place of the square or the dispersed Prussian attack formation to meet tribal opponents.[29] The comments of Colonel H.H. Knollys, editor of the *United Service Magazine*, in 1884 were indicative of changing attitudes in England towards imperial military operations:

> Of more immediate and practical use to a British officer than the tactics to be adopted against a well-armed, well-trained enemy, are those suitable for employment against a savage foe, such as the Ashantees, the Zulus, the Afghans, or the Soudanese, for the reason that regular warfare is with us exceptional, while a campaign against a uncivilized foe in some parts of the world may be considered chronic.[30]

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[28] Col. W.H. Goodenough,'General Gordon on the Employment of Artillery in Irregular Warfare', Proc. R.A.I., 8, (1885), pp.121-25, Lt. C.E. Callwell,'Notes on the Tactics of our Small Wars', Proc. R.A.I., 12, (1884), pp.531-52 and Lt. C.E. Callwell,'Notes on the Strategy of our Small Wars', Proc. R.A.I., 13, (1885), pp.403-20

[29] Sir P.L. MacDougall,'The Late Battles in Soudan and Modern Tactics', Blackwood's, 135, (1884), pp.54-60

[30] Col. H.H. Knollys,'The Present Position of Tactics in England, U.S.M., 2 (1884), p.467

The relative merits and weaknesses of the square were discussed in the presence of several influential military critics at the R.U.S.I. revealing a wide variety of opinions with regard to the conduct of colonial warfare.[31] The lessons derived from recent colonial campaigns formed the subject of the influential Royal United Services Institution prize-essay competition in 1887. In the prize-winning essay, Captain Charles Callwell discerned both tactical and strategical lessons from Britain's disparate colonial military operations since the Crimean War. The paper recognised that lessons of significance could be derived from colonial warfare that would be of value for British troops serving throughout the Empire, including India. Callwell concluded:

> The operations of a few thousand British soldiers in remote theatres of war pitted against adversaries without arms of precision and without organization, bear no comparison, as strategical and tactical studies, with the momentous events of 1866 and 1870; but the lessons to be deduced from their story are none the less interesting and valuable… These operations illustrate the vicissitudes of irregular warfare in every form.… They teach us lessons strategical, tactical, and administrative.[32]

It was significant for the Army in India, however, that no specific mention was made of the trans-border Pathan tribes, although it was recognised that the training of British and Indian troops should be based partly on 'savage' warfare against opponents very different from those envisaged in the official training manuals. It was clearly impossible to employ a square formation in the border hills of the Punjab due to both the terrain and the large target it would present to tribal jezails. The discussion regarding the appropriate tactics for colonial warfare did not, however, have an appreciable impact on official training either in England or India during the 1880s, which

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[31] Maj. C. Cooper King,'Soudan Warfare', J.R.U.S.I., 29, 81, (1885), pp.887-908 and Lt.-Gen. G. Graham,'Fire Tactics: Attack Formations and Squares', J.R.U.S.I., 30, 83, (1886), pp.233-74. See also Col. W.W. Knollys,'Sir Gerald Graham on Infantry Tactics', U.S.M., Part 1, (1886), pp.291-304

[32] Capt. C.E. Callwell,'Lessons to be Learnt from the Campaigns in which British Forces have been employed since the year 1865', J.R.U.S.I., 31, (1887), p.412

remained based primarily on the lessons of the 1870-71 Franco-Prussian War.

The P.F.F. units that had fought in Afghanistan resumed the watch and ward of the border after the Second Afghan War and conducted a succession of minor campaigns, largely without outside military support, to punish those tribes that had been hostile during the operations in Afghanistan. During the Mahsud-Wazir expedition in 1881, its troops enjoyed a decisive superiority over the poorly-armed tribes in Waziristan who were still armed with swords, matchlock jezails and a handful of Enfield rifles enabling comparatively small forces of regular troops to deal with greatly superior numbers of ill-armed and undisciplined tribesman.[33]

The Pendjeh incident in 1885 and the threat of war with Russian troops in northern Afghanistan, however, transformed the situation and had important implications for the organisation and deployment of troops on the North-West Frontier, as well as on British policy towards independent tribal territory. The incident immediately reinforced the emphasis being paid to conventional military training against similarly organised European troops. At a series of large camps of exercise, held by the regular army during the 1880s, British and Indian troops trained intensively for operations against Russian or Afghan troops.[34] During the 1880s large numbers of regular troops were deployed in the Punjab for the first time in preparation for a possible campaign in Afghanistan. The presence of 14,036 men in the ranks of the P.F.F. along the border outside the jurisdiction of the Commander-in-Chief in India, however, prompted repeated requests for their assimilation into the Bengal Army as the prospect of war in Afghanistan increased.[35] A decline in the number of punitive expeditions, the extension of British administration in Baluchistan, improvements in communications and the pacification and disarmament of the trans-Indus districts of the Punjab, moreover, made it appear that the P.F.F. had lost its formerly distinctive role. It was

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[33] Col. S. Black, Secretary to Government, Punjab, Military Department, to Col. G. Chesney, Secretary to Government of India, Military Department, 24th Feb. 1881. P/1730 and The Mahsud-Waziri Expedition 1881, (Simla, 1884) L/MIL/17/13/107

[34] Capt. J.K. Trotter,'Should the European Army in India continue as at Present Constituted, or Should it be Converted in Whole or in Part into a Local Force', J.R.U.S.I., 29, 129, (1885), p.349

[35] Military Department Despatch No. 135 of 1885: Proposals for an increase to the Indian Army, 14th Aug. 1885, and Military Despatch No. 275 of 1885, 29th Oct. 1885, L/MIL/7/5446

finally incorporated into the Bengal Army in August 1886, after the political authorities in the Punjab had assured that it would maintain its close connections with political officers and the militia, finally giving the Commander-in-Chief complete control of all the troops along the border and making the Indian Army solely responsible for military operations against the tribes for the first time. However, despite the change in overall command, the P.F.F. remained localised in the Punjab and was allowed to retain the distinctive character that had made it so effective against Pathan lashkars.[36] The threat of external attack also had important implications for policy towards independent territory and relations with the trans-border tribes following the adoption of the 'scientific frontier' in Afghanistan as the basis of Indian strategy in the event of a Russian invasion in 1888. The safe passage of the Field Army and its maintenance in Afghanistan focused military attention on fostering and securing the support of the trans-border Pathan tribes living astride the main lines of communication through the mountains and exploring the border hills, transforming a hitherto local problem into one of strategic importance.[37]

The P.F.F. continued to act as the 'Warden of the Marches' during the 1880s, along with various militias and levies, leaving the regular Indian Army free to concentrate on training in conventional European warfare. Its infantry regiments continued to carry out training devoted to hill warfare and carried out frequent light infantry training across broken terrain in camps nearby their stations in accordance with Standing Orders.[38] A high standard of training and efficiency in the P.F.F. was maintained by Major-General Sir J. McQueen who carried out week-long annual inspections of each regiment to assess its performance in the field. An officer who served with the 4th Sikh Infantry later observed: 'Hill warfare was the real game. He would take post on the top of a hill some 1000 feet high and make us attack it and then retire off it. If he was not

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[36] Military Department Despatch No. 111 of 1886: Transfer of the Punjab Frontier Force under the orders of the Commander-in-Chief India, 6th Aug. 1886, L/MIL/3/136 and Extract from General Order by His Excellency the Governor General In Council, 23rd July 1886, L/MIL/3/961

[37] See L. Harris, British Policy on the North-West Frontier of India, 1889-1901, (London, Ph.D., 1960), pp.1-41 and also J. Harris,'A Scientific Frontier for India: Background to the Forward Policy of the Nineties', Canadian Journal of History, 1, (1966), pp.46-71

[38] Standing Orders of the Punjab Frontier Force, (Simla, 1889), p.10 L/MIL/17/5/4310

satisfied we jolly well had to do it all over again and if an attack of gout seized him there was no end to the job until we were absolutely worn out.'[39] The conduct of mountain warfare became a subject of growing importance to regular officers serving in India as large numbers of regular troops were deployed in close proximity to tribal territory. The lessons derived from the experience of the mountain artillery batteries and their tactics were examined for the first time in the 1880s in the service press. Their organisation, equipment and training was discussed at length in the *Proceedings of the Royal Artillery Institution* in its 1887 annual prize essay competition, but the brief section devoted to tactics was derived primarily from European experience and made no reference to India.[40] Captain H.C. Simpson, one of the foremost commentators on mountain artillery, noted in 1888 the continuing lack of official instruction and provided a brief summary of mountain artillery tactics based on European manuals and his own personal experience.[41] A former P.F.F. mountain battery commander, moreover, challenged the reliance on European sources and argued that Britain had its own distinctive tradition and experience of mountain warfare equally worthy of discussion. Major E.J. de Latour noted: 'The proceedings of foreign mountain batteries are certainly interesting but hardly as instructive as those of our own service, if only for the reason, that of late years few nations have had the same practical experience in mountainous countries.'[42] At the request of the local commander, Captain J.M. Grierson lectured to the newly formed Peshawar Military Society in July 1888 on the lessons of the Umbeyla Campaign to exemplify the problems of mountain warfare for officers serving in the local garrison as preparations began for a punitive operation in Hazara.[43]

The punitive expedition on the Black Mountain in 1888 exposed the continued limitations of the training system in India.[44] The

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[39] Memoirs of Brigadier-General E.W.S.K. Maconchy 1860-1920, (Unpublished T.S. Memoir), Vol. 1, p.59 N.A.M. 7908-62-1

[40] Capt. W.L. White,'Mountain Artillery: Its Organisation, Equipment and Tactics', Proc. R.A.I., 15, (1887), pp.403-17

[41] H.C. Simpson, 'Tactical Employment of Mountain Artillery' U.S.M. 1, (1888), pp.712-22

[42] Maj. E.J. de Latour,'Mountain Artillery', Proc. R.A.I., 16, (1889), p.519

[43] Capt. J.M. Grierson, 'Mountain Warfare as exemplified by the Ambela Campaign, 1863', Proc. R.A.I. 17, (1890), pp.319-36

[44] See Capt. A.H. Mason, Expedition against the Black Mountain tribes by a force under Major-General Sir J.W. McQueen in 1888, (Simla, 1889). L/MIL/17/13/52

sixteen regular British and Indian regiments forming the majority of the force still relied on guidance in hill warfare from the officers and men of the three experienced P.F.F. regiments serving alongside them or that gleaned from the Standing Orders issued at the beginning of the operation. General F. Roberts instructed Major-General Galbraith, commander of the 2nd Brigade, to train the inexperienced officers under his command in the conduct of hill warfare before the operations commenced.[45] A memorandum originally written by Brigadier-General A. Wilde in 1868 was also circulated to the troops, which provided a bare outline of the tactics of hill warfare.[46] However, the decisive technological superiority of British firearms: Sniders, Martini-Henrys, Gatling guns and mountain artillery still masked the need for appropriate training during the 1880s for regular troops. Throughout the Black Mountain campaign, the poorly armed tribes avoided direct confrontation and attempted to come to close quarters with the troops on only a few occasions. At Kotkai on 24th October 1881 No. 4 Column was attacked by a mass of swordsmen who were mown down by rifles and Gatling guns before they could engage in hand-to-hand combat. Following the engagement, the Hazarawals abandoned resistance in the open and Sir J. McQueen observed: 'The severe lesson learnt by the tribesmen in this action broke down all organised opposition, and in facing the other columns, the enemy confined themselves to guerilla warfare in thick forest, a trying style of fighting which was productive of numerous casualties to our troops, but in which the enemy suffered severely and soon lost heart.'[47]

The 'forward policy' adopted by the Government of India during the late 1880s provoked a series of campaigns against the trans-border Pathan tribes, which led to the commitment of a growing number of regular British and Indian troops, without training or prior experience of hill warfare, alongside the P.F.F. regiments on the North-West Frontier. The concurrent campaigns which took place along the Takht-i-Sulaiman, the Samana Ridge, the Black Mountain, Hunza and Naga stimulated professional interest in the exigencies of hill warfare in England and India, coinciding with a growing acceptance

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[45] Roberts to Galbraith, 21st Sept. 1888, L/MIL/17/5/1615/11
[46] Circular Memorandum for the information and guidance of Officers Commanding Batteries and Regiments, Hazara Field Force, 30th Sept. 1888, L/MIL/17/5/1615/6/1
[47] Maj.-Gen. J.W. McQueen, Commanding Hazara Field Force, to Adj.-Gen. in India, 19th Nov. 1888, P/3484

during the 1890s of the importance of experience derived from colonial military operations.[48] A series of articles appeared in the service press describing the conduct of various military operations against trans-border Pathan lashkars.[49] During the Black Mountain campaign the decisive superiority in firearms of imperial troops was increased when a privately owned Maxim machine gun was used by a British battalion for the first time in mountain warfare.[50] A detailed account of the 1891 Miranzai campaign was published in the J.U.S.I.I. in 1892 as it '… affords a very typical example of the kind of warfare which officers serving in India may find themselves called upon to take part in.' During the campaign it was still all-too apparent that the Orakzais lashkars were at a marked disadvantage against British troops armed with breech-loading rifles and modern artillery. Captain A.H. Mason confidently observed:

> Since the Jowaki campaign in 1877-78 a revolution has taken place in the matter of frontier expeditions, and the ill-armed tribesmen are now beginning to see that it is certain destruction to try and stand up against breech-loaders. In the days of the Brown Bess things were different, and they were then able to meet us with a weapon which, if not so good in some respects, yet the matter of range was equal to, if not better than, our own, and at Ambela they were able to inflict heavy loss on our troops. The advent of the Snider and then of the Martini has, however, altered all this, and now they are beginning to understand that to be shot down at 1,000 yards or more by breech-loaders when your own weapon is a muzzle-loader which may possibly carry an erratic bullet 300 yards, is a one-sided business and a game that does not pay… It is now, therefore, becoming a safe maxim that if a Pathan tribe has once fairly stood up to fight breech-loaders, it will never do so again.[51]

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[48] Spiers, op cit, p.250

[49] See D.A.A.G. R.A.,'Mountain Artillery with the Hazara Field Force N.-W. Frontier of India, 1888', Proc. R.A.I., 17, (1890), pp.257-70, Lt L.C. Gordon,'The Miranzai Expedition 1891', Proc. R.A.I., 18, (1891), pp.475-88, and Capt. P.T. Buston,'Short Account of the Bridging Operations of Bengal Sappers with the Hazara Field Force, 1891', P.P.R.E., 19, (1893), pp.147-56

[50] Adj.-Gen. in India to the Secretary Government of India Military Department, 22nd Sept. 1892, L/MIL/7/14713

[51] Capt. A.H. Mason,'The Miranzai Expedition of 1891', J.R.U.S.I., 36, 168, (1892), p.123

Throughout the expedition the only casualties suffered had been those inflicted by the weather and disease and it ended with the construction of a line of forts along the Samana Range garrisoned by regular troops. An attack on a detachment of troops constructing a road, however, provoked further operations against the Orakzais later the same year. Writing after the second Miranzai campaign one commentator noted: 'A second time General Lockhart showed how easily and effectively a thoroughly well organised, scientifically armed, smartly led British force can brush away superior numbers of ill-disciplined, disorganised, poorly armed tribesmen.'[52] Further to the north, however, during the Hunza-Nagar campaign Indian troops had been opposed, during the attack on Nilt Fort, by tribesmen armed with Russian Berdan, Martini-Henry, Snider, Spencer and Winchester rifles in addition to local matchlocks in sufficient quantities to affect the course of the fighting.[53]

The increasing number and growing size of military expeditions on both the North-Western and North-Eastern frontiers of India involving a higher proportion of regular troops stimulated a growth of professional interest amongst British officers as well as giving large numbers practical experience of mountain warfare. (See Figure 3) It was apparent that the 1889 edition of Infantry Drill, which emphasised conventional European warfare and contained little more than one sentence suggesting the use of close-order drill when facing poorly armed opponents reliant upon shock tactics, was of limited interest to officers currently engaged in mountain warfare.[54] A paper that specifically dealt with the conduct of mountain warfare was published for the first time in 1892 by the J.U.S.I.I., though symptomatically it was a translation of a paper written by a French officer from the *Journal des Science Militaires*, based on European military experience. Major H.C. Simpson, who contributed the article to the United Service Institution, observed that there was no text book on the conduct of mountain or other forms of 'rough' warfare available in India and appended a list of French and German books on

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[52] E.P. Oliver,'Punitive Operations on the North-West Frontier of India', Fortnightly Review, 50, (1891), p.93

[53] E.F. Knight, Where Three Empires Meet A Narrative of Recent Travel in Kashmir, Western Tibet, Gilgit, and the adjoining Countries, (London, 1893), p.373 and Nevill, op cit, p.365

[54] Infantry Drill, (London, 1889), pp.207-8

Figure 3. Proportion of Punjab Irregular/Frontier Force and Regular Army Regiments during expeditions against trans-border Pathan tribe

1	1849 Bazais	26	1880 Mohmand
2	1850 Kohat Pass Afrdis	27	1880 Black Mountain
3	1851-2 Mohmands	28	1880 Marris
4	1852 Ranizais	29	1880 Waziris
5	1852 Waziris	30	1881 Mahsuds
6	1852 Black Mountain Tribes	31	1883 Shiranis (Takht-i-Suliman).
7	1853 Shiranis	32	1888 Black Mountain Tribes
8	1853-4 Jowaki Afridis	33	1890 Zhob Valley
9	1854 Mohmands	34	1891 Black Mountain Tribes
10	1855 Orakzais	35	1891 Miranzai
11	1855-6 Miranzai	36	1891 Hunza and Nagar
12	1857 Bozdars	37	1894 Mahsuds
13	1857 Hindustani Fanatics	38	1895 Chitral
14	1858 Hindustani Fanatics	39	1897 Tochi
15	1859 Waziris	40	1897 Malakand
16	1860 Mahsuds	41	1897 Mohmands
17	1863 Ambela	42	1897 Samana
18	1863 Mohmands	43	1897 Miranzai (Orakzais)
19	1868 Black Mountain Tribes	44	1897 Kurrum (Orakzais)
20	1868-9 Bizotis	45	1897 Punjab Frontier
21	1872 Tochi	46	1897 Khaiber
22	1877 Jowakis	47	1897 Tirah
23	1878-9 Zakha Khel	48	1897-8 Buner
24	1879 Kam Dakka	49	1900-2 Mahsuds
25	1878-9 Zaimkuhts	50	1908 Zakha Khel
		51	1908 Mohmands

the subject of use to interested officers.[55] The specific requirements of warfare on both the North-Western and North-Eastern frontiers of India were discussed for the first time in a series of articles and books written by officers serving in India. Writing in 1892, Captain H.V. Cox, for example, complained that there was insufficient guidance in the Drill Book on jungle warfare in the hills of Burma, where Indian troops endeavoured to bring to battle bands of elusive dacoits.[56]

The 1892 provisional edition of Infantry Drill included a section that discussed the conduct of colonial warfare, but it referred solely to tactics in terms of close-order formations that were clearly inappropriate in mountainous terrain. Indeed, these were a liability against increasingly better armed Pathan tribes, whose tactics did not rely on massed assaults. It officially recognised the term 'savage warfare,' employed to describe colonial campaigns in the military press during the 1880s, which it used to denote the entire class of operations conducted against poorly armed tribesmen throughout the British Empire.[57] It accepted that certain modifications, necessitated by the differing conditions encountered by imperial troops, were of sufficient importance that they should be studied separately and this section was a first step towards discerning authoritative principles. The guidance provided by non-official literature available in India, primarily intended to aid officers preparing for promotion examinations, still either lacked any guidance for colonial warfare or was based on Sudanese experience that had little relevance for officers preparing for frontier service.[58] An attempt was made by Brigadier-General A.A. Kinloch to lay down two forms of attacks suitable for use in mountain warfare by imperial troops in 1892, but it is doubtful whether this had any real impact on instruction in India.[59] Annual training carried out by P.F.F. regiments and a series of practice camps held for the mountain

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[55] Lt.-Col. E. Paquie,'Warfare in Mountainous Countries', J.U.S.I.I., 21, 98, (1892), pp.525-43

[56] Capt. H.V. Cox,'Jungle Fighting', J.U.S.I.I., 21, 97, (1892), pp.443-7

[57] Infantry Drill (Provisional), (London, 1892), p.185

[58] Lt.-Col. E. Gunter, Outlines of Modern Tactics, (London, 1893) and Capt. J. Sherston, Tactics as Applied to Schemes, (London, 1894), pp.49-50

[59] Brig.-Gen. A.A. Kinloch, Forms of Attack, (Allahabad, 1892)

batteries during the 1890s, therefore, represented the only attempt to give specific training in mountain warfare.[60]

The conduct of mountain warfare along India's extensive frontiers was discussed at length in the Institute's influential annual prize essay competition for 1892-93. Two essays were published which outlined the intrinsic problems posed by the climate, terrain, transport and supply for regular troops operating across India's North-Western and North-Eastern borders and went on to attempt to discern general principles to govern the conduct of future operations and peacetime training. In a telling critique the Gold Medal prize winner, Major G.M. Bulloch of the Devonshire Regiment, lambasted the military authorities' failure to provide a suitable training doctrine, and criticised the unsatisfactory nature of instruction for the young officer in hill warfare. In a detailed paper he noted that insufficient attention was paid to mountain warfare and suggested that British troops should make use of the period spent in the hills in the cold weather to ensure they were physically fit and to provide training in piqueting, sangar building and field firing to ensure uniformity of drill and training. Bullock concluded:

> Nearly every year some portion of the army is engaged in more or less important operations in the hills. Yet of these operations there is seldom to be found a satisfactory history. The lessons learnt, the mistakes made, the steps taken to rectify these mistakes, may be recorded for the benefit of Head-Quarters Staff, but they are not published in any form which is generally available for the army. The young soldier who wishes to study mountain warfare in India, has to be content with a very few books as a rule, and those are not always obtainable, being old and often out of print. It is not a subject of instruction at garrison classes, and what is known of it is chiefly derived from experience, and from the training so many officers have had in many a mountain war.
>
> But is this satisfactory? Should not the lessons of the past be collected, and available for all to learn?

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[60] See Report on the Mountain Artillery Practice Camps at Dhaqul and Rajpur, 1892-93, (Simla, 1893), Report on the Mountain Artillery Practice Camps held at Rajpur, Dhaqul, and Paniala in 1893-94, (Simla, 1894), L/MIL/7/10831 and Report on the Mountain Artillery Practice Camps held at Rajpur and Dhaqul in 1894-95, (Simla, 1895) L/MIL/7/10834

> Should not the warfare we are likely to engage be a subject of study, in preference to a warfare in which our army seems never likely to engage?
>
> The lines of our military education has been laid down too much by those whose eyes are dazzled by the great wars of the Continent, and forget that the work we have to perform is equally arduous, requires as careful a study, and that the material for that study are to be found in our own "little wars."[61]

The author of the second published contribution to the essay competition attempted to chart the historical development of military expertise in mountain warfare in the clear belief that valuable lessons could be derived from past experience. Captain F.C. Carter stressed the importance of wider preparation for hill warfare, especially in terms of the provision of training manuals, and suggested the addition of special notes on the requirements of jungle, desert, and mountain warfare to the new Drill Book, but he too recognised the intrinsic difficulty of laying down any precise tactical instruction for such varied operational conditions.[62]

The J.U.S.I.I. and the service press in England published a succession of articles relating to the development of a doctrine and appropriate training for hill fighting during the 1890s, reflecting growing professional interest and awareness of the specific requirements of colonial warfare in India. Although the 1893 Drill Book was regarded as a considerable improvement on the earlier edition it was still deficient in guidance on the subject of jungle, desert and mountain warfare.[63] Writing in the *Proceedings of the Royal Artillery Institution*, Major H.C. Simpson urged that the theory and practice of mountain artillery tactics and irregular warfare in general should be taught to the officers and men in mountain batteries stationed in India and England. A French pamphlet was recommended to complement the artillery drill books after noting that nothing had been published in English on mountain and irregular

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[61] Maj. G.M. Bullock, 'Mountain Warfare as Applied to India', J.U.S.I.I., 22, 107, (1893), p.330

[62] Capt. F.C. Carter, 'Mountain Warfare as Applied to India', J.U.S.I.I., 22, 110, (1893), pp.414-66

[63] Infantry Drill, (London, 1893)

warfare since 1875.[64] The basis of training in India still remained, however, predicated primarily on military operations against similarly organised, trained and equipped Russian troops. The 1894 J.U.S.I.I. prize essay competition directly discussed the difficulties of devising suitable training programmes for an army operating in widely differing theatres of war and against opponents that changed with bewildering rapidity. The prize winning author, Captain F.C. Carter, reiterated his belief that the military authorities had failed by not providing the bulk of British and Indian troops with appropriate training for local requirements, with emphasis instead being placed on training along continental lines. He noted that additional information was required to complement that already contained in the Drill Book and suggested the inclusion of an authoritative "Indian Appendix" which would contain hints and precepts dealing with operations against tribesmen on the frontiers of India over difficult terrain that could become the recognised authority on the subject. Carter went on:

> Until the present drill season, however, I believe no attempt has been made… to exercise troops with a view to warfare other than that against civilized foes in fairly open, level, or partially heavy country. Mountain and jungle warfare against savage tribes has, in all our big camps, been an unknown factor… That some of our troops are extremely proficient in Guerilla and Mountain Warfare, there is no doubt; but this is due more to experience gained during the ever frequent little frontier wars, rather than to the intuition given in times of peace; and in many cases, 'ere officers and men have become thoroughly "aguerri" to this description of fighting, they have had to undo a great deal learnt on the parade ground, and start afresh with experience and common sense as their guides in lieu of the drill book. I remember full well, during one campaign, after many little brushes with the enemy and not a few night attacks, a Sikh Officer asked me if we were ever going to advance against the enemy in "pucca (real) attack formation."

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[64] Maj. H.C. Simpson, 'Notes on Mountain Artillery Establishments, their training, and Personal Equipment,' Proc. R.A.I. 21, (1894), p.265

> This remark is instructive as showing within the narrow grooves the instruction imported to our soldiers has been laid.[65]

Carter concluded that the present system of training and drill books were palpably incomplete and needed revision to reflect imperial requirements.[66]

The interest in mountain warfare continue unabated in the military press the following year, when a second contribution to the 1894 prize essay competition was published that argued in a similar vein. Captain W.G. Hamilton recognised that the Indian Army would be forced to rely on personal experience for some time to come because of the absence of training manuals or books and the inaccessibility of other literature relating to the conduct of 'savage warfare'. The practical training of British and Indian troops for mountain warfare posed certain practical difficulties for the army in India given the limited number of hill stations with terrain suitable for training purposes and officers accustomed to hill warfare. The wide differences in the armament and tactics of various 'savage' opponents also militated against the development of a system of widely applicable training for warfare along the frontiers of India. Hamilton observed:

> Our troops, it may be urged, have had so much practice in fighting savage tribes, that tactical instruction in such a matter is superfluous. This is true to a certain extent, but the experience gained by part of the army in India requires to be imparted to the whole. There are no text-books on the subject and the literature of savage warfare though fairly full is not generally accessible. It would, I think, be of undoubted assistance if the accumulated experience gained in many wars with many kinds of savages were crystallized in the form of a short official text-book; meanwhile the personal knowledge and experience of individuals must be our guide… While it would be a work of supererogation to teach the troops of the Punjab Frontier Force, for instance, how to fight Pathans or, to

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[65] Capt. F.C. Carter, 'On the Tactical training in District Concentrations, Best Prepared for Preparing the Army in India for War:- (a) Against a Civilised Enemy. (b) Against Savage Tribes in Mountain or Jungle Warfare', J.U.S.I.I., 23, 117, (1894), p.146

[66] Ibid, p.175

instruct the Burma battalions in the subtleties of jungle warfare, the experience of recent hill campaigns shows that some preliminary instruction is certainly required in many cases, and especially in the case of British or Native regiments new to the work required. How many regiments, to give but one instance, with out some experience, know how to deal with the common form of Pathan offensive tactics, firing into camp at night? Yet regiments may be subjected to the ordeal the first night they cross the frontier, and in such cases the result has not infrequently proved more encouraging to foe or friend. A few days practical training at a camp would be invaluable to a regiment likely to be so circumstanced. This is one example out of many which suggest themselves.[67]

The development and adaptation of training to the varied exigencies of colonial warfare around the British Empire, and more immediately on the frontiers of India, posed a complex problem. Hamilton believed that experienced officers represented 'the natural teachers in the theory of savage warfare,' and proposed a detailed programme of progressive training commencing with a few companies and working up to the use of a full brigade of all arms. Small camps of instruction should be held, at such places as Ranikhet or the Murree Hills, with a skeleton enemy provided by men accustomed to tribal tactics as well as the establishment of permanent schools to provide combined tactical training in hill warfare at which troops could be instructed for a month each autumn. The discussion in the J.U.S.I.I. during 1894-95 was a significant recognition of the importance of appropriate training and indicated some of the fundamental problems involved in devising suitable training for regular troops in such a specialist form of warfare.[68] Despite these detailed suggestions, the Adjutant-General in India made no attempt to formally alter the existing system of training to reflect the growing awareness of the peculiar requirements of warfare on the North-West Frontier or to absorb the lessons of the early 1890s. Apart from a small pamphlet written by Major O.C. Radford, the Commandant of the 4th Punjab

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[67] Capt. W.G. Hamilton,'On the Tactical Training in District Concentrations best fitted for Preparing the Army in India for War', J.U.S.I.I., 23, 119, (1894), pp.103-4

[68] Ibid, pp.105-7

Infantry, for probationary officers serving in the Punjab and the Standing Orders of the P.F.F. regiments there were still no sources of guidance available for British officers in mountain warfare.[69]

The steady extension of British influence along the line of the strategic passes into tribal territory during the mid 1890s brought the Indian Army into further conflict with the trans-border tribes. In November 1893, the Durand Agreement defined relative spheres of influence between India and Afghanistan giving the Government of India a free hand in dealing with the independent tribes without outside interference. However, a growing number of regular troops were required to police tribal territory, provide new garrisons and to secure their lines of communication as the P.F.F. lacked sufficient manpower to control the entire border. The delimitation of the Durand Line in Waziristan during 1894 provoked further military operations against tribesmen who regarded the construction of boundary pillars as a direct challenge to their political independence. A mixed Mahsud and Wazir lashkar attacked the military escort to the delimitation party at Wano on 4th November 1894, successfully overrunning the camp. After heavy hand-to-hand fighting the tribesmen were defeated and pursued into the surrounding hills, but only after serious casualties were inflicted on the Indian column and several rifles stolen.[70] The ensuing punitive operations, conducted under the command of General William Lockhart, was predominantly composed of the highly trained and experienced P.F.F. regiments.[71] During the winter of 1894-95 three columns traversed Waziristan, destroying villages and seizing food and livestock, suffering a total of only 23 casualties during skirmishes with the poorly armed local tribesmen. Unfortunately due to the absence of resistance there was little opportunity for inexperienced British officers accompanying the P.F.F. troops to learn much about frontier warfare.[72]

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[69] Maj. O.C. Radford, Notes for Panjab Probationers on 1. Castes 2. Hill Tactics 3. Customs 4. Idiomatic Sentences, (Lahore, 1894), pp.25-31

[70] Brig.-Gen. A.H. Turner to Adj.-Gen. in India, 16th Nov. 1894, L/MIL/7/15362

[71] See Lt.-Col. A.H. Mason and Lt. G.K. Cockerill, Operations against the Mahsud Waziris by a force under the command of Lieutenant-General Sir William Stephen Alexander Lockhart in 1894-95, with a short account of the events which led up to the expedition, (Simla, 1897) L/MIL/17/13/108

[72] Gen. Sir A. Haldane, A Soldier's Saga: The Autobiography of General Sir Alymer Haldane, (Edinburgh and London, 1948), pp.76-7

The mobilisation of the 1st Division in March 1895 to relieve the beleaguered British Agent and garrison at Fort Chitral, revitalised interest in the conduct of hill warfare. The Chitral Relief Force that assembled at Mardan, under the command of Major-General Sir Robert Low, to relieve the garrison by an advance through Lower Swat towards Chitral, totalled 15,000 troops and over 30,000 pack animals required to maintain it in the field.[73] The majority of the estimated 12,000 tribesmen that defended the Malakand Pass on 3rd April were armed with swords or resorted to rolling boulders down the mountain sides at the advancing British troops, while the remainder possessed a mixture of muzzle-loading and breech-loading firearms.[74] Tribal sangars and breastworks were clearly marked with standards allowing rifle volleys, mountain artillery and Maxim machine guns to exact a heavy toll of the defenders. As one observer observed: 'The Maxims playing from right and left of the gorge created an ideal picture of a civilised attack on a savage enemy.'[75] At the cost of only 60 casualties the 2nd Brigade captured the position after killing over 500 of the comparatively poorly armed tribesmen.[76] The decisive defeats inflicted at the Malakand and at Khar on 4th April ended all major resistance, except for some minor fighting at the Panjkora River, sniping of camps at night and attacks on small parties and individuals during the advance up the Swat Valley. Fort Chitral was finally relieved by a column of Imperial Service Troops advancing from Kashmir restoring peace to the border after a six week campaign.

The Chitral campaign re-confirmed the importance of the study of hill warfare by the Indian Army. Throughout the fighting the highly trained and experienced P.F.F. regiments had demonstrated their proficiency in the tactics of hill warfare and it also extended further practical experience to regular British and Indian troops.[77] The operations had also indicated that the technological superiority

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[73] See Capt. W.R. Robertson, An Official Account of the Chitral Expedition 1895, (Calcutta, 1898) and Capt. G.J. Younghusband and Capt. F.E. Younghusband, The Relief of Chitral, (London, 1895)

[74] Field Marshal Sir W. Robertson, From Private to Field Marshal, (London, 1921), p.71

[75] The Chitral Expedition 1895 containing an account of the adventures and captivity of Lieutenants Fowler and Edwards together with full details of the operations of General Low's force, (Allahabad, 1895), p.29

[76] G.O.C. C.R.F. to the Adj.-Gen. in India, 5th April 1895, White Mss, Mss.Eur.F.108/35

[77] Maj. W.G. Hamilton,'The 2nd Brigade in the Chitral Relief Force', J.R.U.S.I., 40, 224, (1896), p.1237

enjoyed by British arms was on the decline, when the Imperial Service Troops advancing from Kashmir and the defenders of Fort Chitral were opposed by tribesmen armed with Sniders and Martini-Henry rifles qualitatively superior to their own weapons.[78] After Dir Fort was captured evidence was found indicating the tribes were actively seeking to secure their own 'arms of precision' and revealing the existence of a lucrative arms trade on the North-West Frontier.[79] The inability of the recently introduced Lee-Metford rifle to stop charges by determined Pathan swordsmen, however, led to the development of Dum-Dum pattern expanding bullets, designed specifically with improved 'stopping power' for British troops engaged in 'savage warfare' on the North-West Frontier.[80] The campaign prompted the publication of further lectures, articles and books during 1895, that discussed the special conditions and requirements of mountain warfare in India.[81] At a lecture at the R.U.S.I. in London, Major F.C. Carter noted that recent operations in India could be characterised exclusively as mountain warfare and stressed the need for training and preparation for future campaigns. His lecture provoked a lengthy discussion during which General J.J. Gordon called for the publication of a condensed record of British experience gained in mountain warfare and emphasised the value of small wars for instructing officers in initiative, eye for ground and common-sense.[82] The professional interest in hill warfare and developing appropriate training regimes continued during the following year, in a series of articles that attempted to deduce lessons from the recent campaigns on the North-West Frontier.[83] A detailed article was published in the J.U.S.I.I. in 1896 discussing hill warfare conducted on both the North-Western and North-Eastern

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[78] Townshend to Durand, 25th April 1895, White Mss, Mss.Eur.F.108/37 and Lt. C.G. Stewart,'An Account of the Relief of Chitral Fort from Gilgit and the Siege of Chitral', Proc. R.A.I., 22, (1895), pp.399-404

[79] T.R. Moreman,'The Arms Trade and the North-West Frontier Pathan Tribes, 1890-1914', J.I.C.H., 22, 2, (1994), pp.191-2

[80] See E.M. Spiers,'The Use of the Dum Dum Bullet in Colonial Warfare', J.I.C.H., 4, 1, (1975), pp.3-14

[81] See H.C. Thomson, The Chitral Campaign: A Narrative of Events in Chitral, Swat and Bajour, (London, 1895), Capt. F.E. Younghusband,'The Chitral Campaign', J.R.U.S.I., 40, 215, (1895), pp.5-23 and Capt. G.F. Herbert,'The Artillery in Chitral, Proc. R.A.I., 22 (1895), pp.501-10

[82] Maj. F.C. Carter, 'Mountain Warfare in India', J.R.U.S.I., 39, 213, (1895), pp.1071-1100

[83] Maj. A.W. Radcliffe, 'Convoy Escort Duties in Mountain Warfare', J.U.S.I.I., 24, 121, (1895), pp.226-8, and Capt. O.C. Williamson,'Encampments in Hill Warfare on the North-West Frontier of India', Proc. R.A.I., 24, (1897), pp.243-49

Frontiers of India, which noted that Indian troops lacked suitable equipment and training. Its anonymous author observed that each enemy's tactics needed to be studied and copied by Indian troops as they were suited to the terrain, and that losses had been suffered by imperial troops because of a lack of appropriate training.[84] Both official and non-official manuals continued to emphasise pragmatic adaptation to local conditions or provided limited information on the use of the square in open terrain. As Lieutenant-Colonel Gunter observed: 'The methods employed must vary with and be adapted to those of the enemy, to his fighting character, weapons, to the description of country, and to the object to be attained. No rules could, therefore, be of universal application…'[85]

The growing professional interest in the conduct and requirements of 'small wars' displayed in the military press in England and India indicated that the brief section on 'savage warfare' in Infantry Drill was no longer regarded by many British officers as a sufficient basis of instruction. It was perhaps indicative of these changing attitudes that a leading military theorist and 'crammer', called directly for instruction in Britain's imperial military requirements. T. Miller Maguire observed: 'While looking at the stars we tumble in a ditch, and while lost in wonder at how to move effectively from Strasbourg, Mayence, and Metz towards Paris with many divisions of cavalry and armies consisting each of from three to eight corps, we may forget how to handle a few battalions in the passes of the Suleiman Range or in the deserts of Upper Egypt.'[86] During the 1890s the War Office had received a growing number of requests for guidance in the conduct of 'small wars', from officers serving throughout the Empire.[87] A small manual published under the auspices of the Intelligence Department, written by Britain's acknowledged leading authority on the conduct of colonial warfare was a direct response. Captain Charles Callwell's *Small Wars: Their Principles and Practice* represented the first detailed comprehensive systematic study devoted to the military

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[84] A Frontier Soldier,'Notes on Mountain Warfare', J.U.S.I.I., 25, 124, (1896), pp.19-43

[85] Lt.-Col. E. Gunter, Outlines of Modern Tactics, (London, 1895), p.239

[86] T. Miller Maguire,'Our Art of War as Made in Germany,' U.S.M. 13, 810, (1896), p.126

[87] Maj.-Gen. E.A. Wood, comments on Maj. W.D. Conner,'Incidents of Bush Warfare', Proc. R.A.I., 23, (1896), p.92

requirements of Britain's colonial campaigns. It dealt at length with the peculiar tactical and strategical exigencies of colonial warfare and stressed that unmodified European methods were unsuitable for military operations in the Empire. Callwell observed: 'The conduct of small wars is in fact in certain respects an art by itself, diverging widely from what is adapted to the conditions of regular warfare, but not so widely that there are not in all its branches points which permit comparisons to be made.'[88] Although the book was of clear value to the Indian Army, with its discussion of the general requirements of colonial warfare, it did not address the peculiar tactical requirements of the North-West frontier against the hill tribes. It was favourably reviewed by the J.U.S.I.I. and recommended as a 'valuable textbook' in light of the marked increase in military operations throughout the Empire, but it was not widely available to officers serving in India until after the close of the century.[89]

The large-scale tribal risings that broke out along the length of the North-West Frontier during the summer, autumn and winter of 1897-98, provided a catalyst for further professional interest regarding the specific military requirements of colonial warfare in India. The fighting began when a British Political Officer and his military escort were unexpectedly attacked by Madda Khel Wazir tribesmen during a jirga at Maizar in Northern Waziristan on 10th July 1897. Heavy losses were inflicted on the surprised troops before they fought their way clear of the village and withdrew to Datta Khel. Major-General G. Corrie Bird advanced into Waziristan during the summer with two brigades, consisting primarily of P.F.F. troops, to punish the section implicated in the attack, overawe the surrounding tribes and to prevent the localised incident spreading along the frontier. Although the unrest was quickly suppressed by the Tochi Field Force without serious resistance, fighting quickly spread along the rest of the North-West Frontier.[90] The isolated fort at Chakdara, on the road to Chitral, was surrounded on 26th July by thousands of tribesmen from the Swat Valley, who then advanced towards the British garrison at the Malakand Pass. An initial attack overran part of the position, but heavy fighting continued between

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[88] Capt. C.E. Callwell, Small Wars: Their Principles and Practice, (London, 1896)
[89] 'Small Wars: Their Principles and Practice by Captain C.E. Callwell, R.A.', J.U.S.I.I., 25, 125, (1896), pp.228-9
[90] See Maj. G.V. Kemball, Operations of the Tochi Field Force in 1897-98, (Simla, 1900) L/MIL/17/13/101

26th-30th July 1897 while reinforcements were rushed to the area to support the hard pressed Indian troops. The fierce hand-to-hand fighting against men predominantly armed with knives and swords was reminiscent of earlier frontier campaigns, but the presence of other tribesmen armed with Martini-Henry rifles inflicted significant casualties. Although the assault on the Malakand continued for the following four nights, though with decreasing enthusiasm after over 3,000 casualties were inflicted on the lashkar, the position was secured until reinforcements arrived to relieve the hard-pressed troops.[91]

The Malakand Field Force successfully relieved Chakdara and conducted punitive operations in the Swat Valley throughout August, although it encountered little resistance and returned at the end of the month. An attack on the fort of Shabkadr in Peshawar District on 7th August by Mohmand tribesmen, reinforced by Utman Khel, Mullagoris and Afghans, widened the scope of hostilities. The Malakand Field Force and the newly mobilised Mohmand Field Force in British territory commenced operations during September to punish the hostile tribesmen for complicity in the attack. Two brigades of the Malakand Field Force moved southwards through Bajaur and Mohmand country while further British and Indian troops advanced northwards via the Gandab Valley to join forces. The advance brigade of the Malakand Field Force reached Nawagai without encountering resistance, but the 2nd Brigade was unexpectedly attacked at Markhani by Mamund tribesmen dislocating the entire plan of campaign. While the 3rd Brigade halted pending the arrival of reinforcements, Brigadier-General Jeffreys' 2nd Brigade conducted operations in the Mamund Valley to punish the local tribesmen for their attack. The fighting between 15th and 30th September against lashkars heavily armed with Martini-Henry and Remington rifles, as well as plentiful supplies of ammunition, was dramatically different from that earlier in Waziristan and at the Malakand. Mamund lashkars refused to attack at close quarters and relied on long-range rifle fire to harass the Indian columns, only attacking in strength when the Indian troops began to withdraw at the end of the day's fighting. During the withdrawal to camp on 16th September a portion of the force was benighted in a small village

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[91] Capt. H.F. Walters, The Operations of the Malakand Field Force and the Buner Field Force 1897-98, (Simla, 1900), pp.15-20 L/MIL/17/13/55

several miles from the perimeter camp.[92] Following the engagement Brigadier Jefferys observed: 'We can do a lot of damage and kill a few men but we cannot make a bag. They retire on our advance right up the hills, fire at long range 1800 to 2000 yards, and as soon as we commence to withdraw down they come from rock to rock.'[93] The heavy fighting on 16th September cost the 2nd Brigade 150 killed and wounded, the highest loss suffered by the Indian Army on the North-West Frontier for twenty years.[94]

The 3rd Brigade was attacked at Nawagai at night on 18th and 20th September by over 3,000 swordsmen, who attempted to rush its entrenched perimeter camp under the cover of rifle fire from the surrounding hills. Although the assault was conducted with considerable tactical skill, it was repulsed by shrapnel and rifle volleys with heavy casualties under illumination provided by star shells. A total of 32 casualties including the brigade commander, however, were suffered within the encampment and 133 transport animals were also killed or wounded.[95] The sophisticated fire and movement tactics employed by the lashkar led Sir Bindon Blood to suspect the presence of trained Afghan or ex-Indian soldiers in its ranks. The limitations of the training of the British and Indian troops were exposed during the operations by the Malakand Field Force against the Mamunds. Writing to the Commander-in-Chief in October, Sir Bindon Blood observed: 'There is no doubt that our officers and men have much to learn in regard to keeping together, and seeing to mutual support, and to the ground, when they get away from direct authority. All the mishaps that have occurred here are traceable to carelessness on these points - which is brought out by the superior smartness of the enemy.'[96]

The Mohmand Field Force encountered little resistance when it advanced up the Gandab Valley from Shabkadr, and it established contact with the Malakand Field Force on 21st September at Lakarai. The Badmanai Pass, occupied by the Adda Mulla and his lashkar, was captured by the combined force and the troops destroyed the tribal

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[92] Lt. Viscount Fincastle and lt. P.C. Elliot-Lockhart, A Frontier Campaign: A Narrative of the Malakand and Buner Field Forces on the North West Frontiers of India, (London, 1898), pp.133-4

[93] Jefferys to White, 21st Sept. 1897, White Mss, Mss.Eur.F.108/38

[94] B. Blood, Four Score Years and Ten: Sir Bindon Blood's Reminiscences, (London, 1933), p.302

[95] Maj.-Gen. Sir Bindon Blood to Adj.-Gen. 20th and 21st Sept. 1897, L/P&S/7/96

[96] Blood to White, 7th Oct. 1897, White Mss, Mss.Eur.F.108/38

stronghold at Jarobi, against only desultory opposition from the tribesmen who declined to fight a decisive action. A jirga held with representatives of the Mohmand tribes on 28th September agreed terms bringing an end to the fighting, but the Mohmand Field Force occupied the area until the fines had been collected. Although the operations in the Mamund Valley dragged on during September, tribal resistance declined after heavy casualties were inflicted on a lashkar around Agrah and Gat villages on the 30th September. Following the destruction of the village of Badalai on 3rd October active operations against the Mamunds ended and Indian troops withdrew back into British territory.[97]

The operations in Waziristan, Swat, Bajaur and the Mohmand country were a prelude to the largest and most difficult campaign fought by the Indian Army in 1897-98, as unrest spread southwards to affect the Afridis and Orakzais. The British garrisons stationed at the mouth of the Khyber Pass, along the Samana Ridge and in the Kurram Valley were reinforced as it became evident that the tribes were actively hostile. On 23rd August Afridi lashkars attacked outposts and forts in the Khyber Pass held by garrisons of the locally recruited Khyber Rifles (See Figure 4). Although the defenders successfully resisted until 25th August, they then surrendered with the loss of the garrison's Snider rifles and 50,000 rounds of ammunition, closing the Khyber Pass. Fighting continued throughout August and September with a series of skirmishes along the Samana ridge and in the Kurram Valley. At Sadde on 16th-17th September, a camp occupied by the 1st Brigade was attacked by 2,000 Massuzai tribesmen, who were repelled with heavy casualties after they attempted to rush the perimeter. The forts on the Samana ridge were attacked in strength by a mixed Afridis and Orakzais lashkar during mid September. Fort Saragarhi fell to the tribesmen with the death of the entire garrison of 21 sepoys from the 36th Sikhs following a determined resistance. Following this defeat, a force from Kohat under General Yeatman Biggs relieved the other isolated forts and ensured the security of the border while preparations were underway for future operations.[98]

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[97] G.O.C. Malakand Field Force to Adj.-Gen., 2nd Oct. 1897, L/P&S/7/96

[98] Foreign Department Despatch No. 143 of 1897 (Frontier): Disturbances on the North-Western Frontier, 14th Oct. 1897, L/P&S/7/96

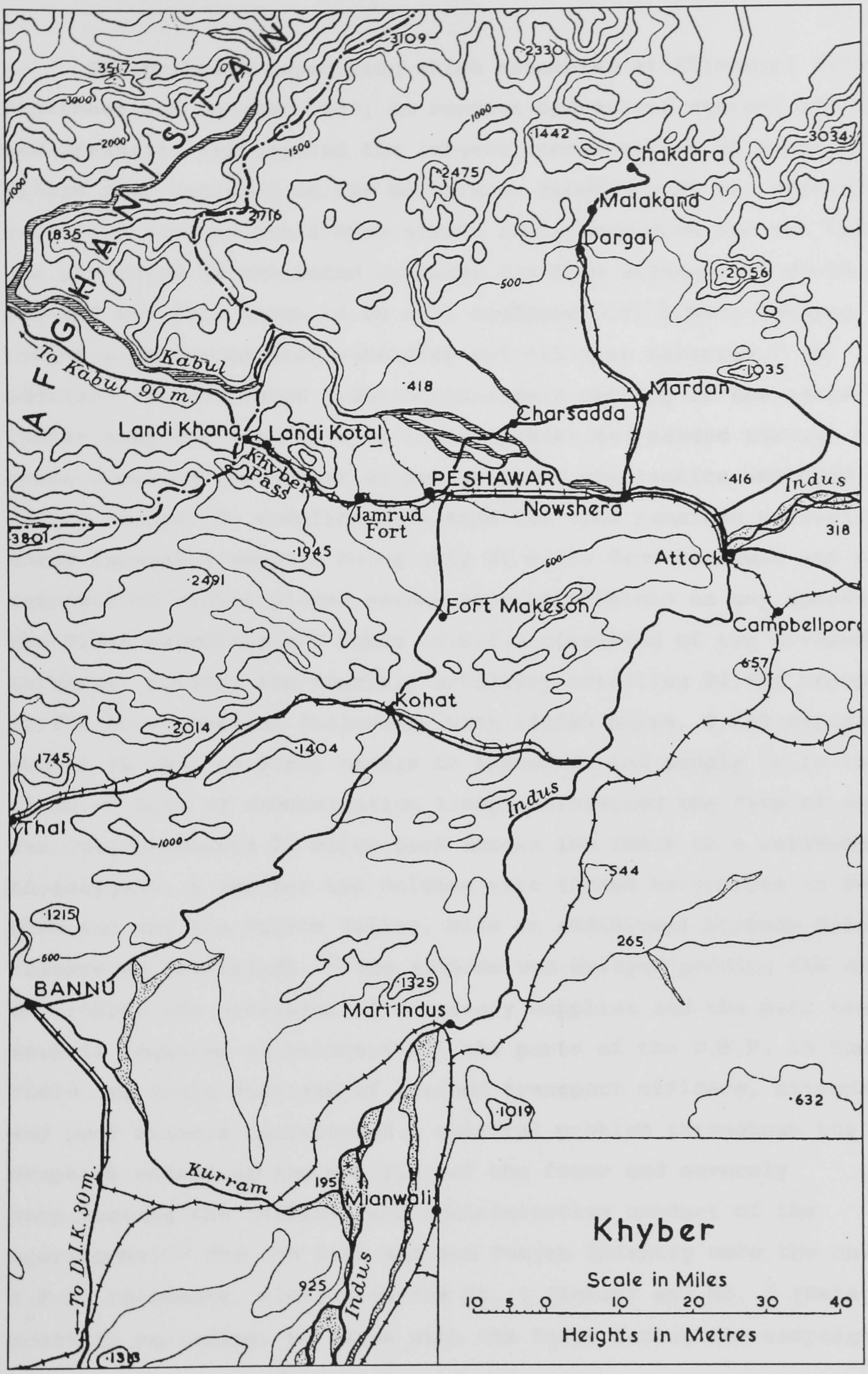

Figure 4. The Khyber Pass and Surrounding Area

The punitive expedition which assembled at Shinawari during September and October 1897, to conduct operations against the Afridis and Orakzais, represented the largest concentration of imperial troops ever deployed on the North-West Frontier. It was expected that a British advance would meet strong resistance from the two tribes, who possessed an estimated combined fighting strength of 40-50,000 men and who were known to be well equipped with breech-loading rifles bought with income from subsidies and military salaries.[99] In addition, an estimated 2,000 Afridis were serving in the ranks of the Indian Army and many more of their kinsmen had passed through its ranks swelling the number of men aware of the tactics employed by Indian troops. To complicate matters the area remained virtually terra incognita despite being only 60 miles from Peshawar and the approach of winter placed severe time constraints on any operations. The Tirah Expeditionary Force (T.E.F.) consisted of two divisions of infantry, cavalry and mountain artillery totalling 34,506 troops and 19,858 non-combatant followers, with 14,593 mules, 8,119 horses and ponies as well as 2,811 camels to transport and supply it in the field.[100] Line of communication troops maintained the flow of supplies and reinforcements 73 miles back across the Indus to a railhead at Khushalgarh. A further two columns were formed to operate in Peshawar District and the Kurram Valley, with an additional brigade held in reserve at Rawalpindi.[101] The advance was delayed pending the arrival of troops, the provision of necessary supplies and the pack transport animals required to maintain all the parts of the T.E.F. in the field. An acute shortage of trained transport officers, attendants and pack animals represented a critical problem throughout the campaign affecting the mobility of the force and severely complicating the tactical and administrative conduct of the operations.[102] The 3rd Sikh and 3rd Punjab Infantry were the only P.F.F. regiments, along with the No. 1 (Kohat) and No. 2 (Derajat) mountain batteries, to serve with the force during the campaign, due

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[99] White to Elgin, 1st Sept. 1897, Elgin Mss, Mss.Eur.F.84/71

[100] Christiansen, op cit, p.376

[101] See Capt. H.F. Walters, Operations of the Tirah Expeditionary Force 1897-98, under the command of General Sir William Stephen Alexander Lockhart, (Simla, 1900) L/MIL/17/13/99

[102] See Report on the Commissariat-Transport Arrangements of the Tirah Expeditionary Force, 1897-98, (Calcutta, 1899) L/MIL/17/5/1856

to ongoing operations elsewhere and the large number of Afridi sepoys enlisted in the ranks of its other regiments whose loyalty was questionable.[103] Several regular British and Indian units had served in tribal territory before in 1895 - the 2nd Battalion King's Own Scots Borderers, 1st Gordon Highlanders, 15th Sikhs and the 1/3rd and 2/4th Gurkhas - or had formed part of the Mohmand Field Force. The vast majority, however, were regiments from cantonments on the Indian plains lacking any experience or knowledge of the requirements of hill warfare and whose training was based solely on the Drill Book. The 2nd Battalion Derbyshire Regiment, for example, had served in India for fifteen years, but only one or two officers had ever been west of the River Indus during that period.[104] A small section on tactics was included in the Standing Orders issued by the headquarters of the T.E.F. at the beginning of the campaign, which covered skirmishing and other elementary hill training.[105] The vast majority of the British regiments were given their first rudimentary introduction to the tactics of hill warfare when the force was concentrated at Shinwari. Captain A.K. Slessor noted: 'One morning by way of variety the Battalion was taken out to practice the attack, in the direction of the Kotal, and realized very forcibly that the pretty little manoeuvres and formations of the parade ground or ordinary field day on the plains have to be chucked overboard when it comes to scrambling about hills like the side of a house, as was the case with most things laid down in the Infantry Drill.' 'In fact, the first thing the British soldier has to do,' the same author went on 'when he goes on active service, is as a rule, to renounce the drill-book, like the devil and all his works, and start to learn his trade afresh.'[106]

The Second Division reconnoitred the route into Tirah in strength on 18th October, culminating with an attack against tribesmen occupying the precipitous ridge that dominated the line of advance. After a successful attack, the British force abandoned the position and retired to Shinawari later the same day due to the lack

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[103] H.W. Mills, The Tirah Campaign - being the Sequel of the Pathan Revolt in North-West India, (Lahore, 1898), pp.40-2

[104] Col. H.C. Wylly, From the Black Mountain to Waziristan, (London, 1912), p.vii

[105] Standing Orders by General Sir. W.S.A. Lockhart, Commanding Tirah Expeditionary Force, 9th Oct. 1897, N.A.M. '1997-98' (549.14)

[106] Capt. A.K. Slessor, The Second Battalion Derbyshire Regiment in Tirah (London, 1900) p.44 and p.95

of supplies of food and water. When the main column commenced its advance on 20th October it found Dargai occupied in strength by Afridi and Orakzais tribesmen armed with Enfield, Snider and Martini-Henry rifles. The attack carried out by the 3rd Brigade at Dargai on 20th October 1897 graphically illustrated the impact of modern 'arms of precision' on the conduct of hill warfare. When the assaulting troops attempted a frontal attack on the position, they were unable to cross a narrow neck of ground below the ridge for most of the day which was swept by intense rifle fire from the heights above.[107] A series of costly attacks were carried out by five battalions of infantry illustrating the difficulties of attacking a fortified position defended by resolute tribesmen armed with modern rifles. The fire of massed batteries of mountain artillery was unable to dislodge or suppress the riflemen hidden in crevices in the cliff or in carefully constructed sangars. Dargai was finally captured when a concerted rush was made across the neck by the Gordon Highlanders, forcing the tribesmen to hurriedly abandon the ridge. The scale of the casualties inflicted on the T.E.F. at Dargai, 172 killed or wounded, was unprecedented and indicated that the decisive technological superiority in firearms enjoyed by imperial troops since the Jowaki campaign had ended.[108]

The seizure of Dargai represented the last major set-piece engagement of the Tirah Campaign. Both the Afridi and Orakzais lashkars made no determined effort to defend the passes which blocked the advance of the Indian troops and conducted a delaying action against the T.E.F. as it moved across the Chagru Kotal into the heart of Tirah.[109] Imperial troops advancing towards the Sampagha Pass through the Khanki Valley were heavily sniped by riflemen hidden on the hill sides along the line of march and skirmishes occurred each day between small groups of tribesmen and foraging parties. It soon became apparent that the possession of modern rifles by the tribes would greatly complicate the conduct of military operations in Tirah.

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[107] G.O.C. T.E.F. to Adj.-Gen. in India, 20th Oct. 1897, L/P&S/7/97, Yeatman Biggs to White, 23rd Oct. 1897, White Mss, Mss.Eur.F.108/38 and Lt.-Gen. Sir G.F. MacMunn, 'The Storming of Dargai (20th December 1897)', A.Q., 17, 2, (1928), pp.370-9

[108] Foreign Department Despatch No. 158 of 1897 (Frontier): Correspondence regarding the Tirah Afridis and the Orakzai tribe, and the punitive expedition sent against them under General Sir W. Lockhart, 11th Nov. 1897, L/P&S/7/97

[109] Gen. Sir W.S. Lockhart, Commanding Officer T.E.F., to Adj.-Gen. in India, 9th Dec. 1897, P/5477

Afridi marksmen hidden in the pine-covered hills commanding the valley inflicted over 50 casualties during the night of 25th October against the occupants of Karappa Camp, who had neglected to take the elementary defensive precaution of 'crowning the heights' or building adequate defences surrounding the camp.[110] The vulnerability of the densely packed perimeter camp to long-range rifle fire, led to the hurried construction of large fortified piquets each containing a company of infantry on the surrounding heights at a distance of one mile from camp. Their size reflected the continued expectation that massed attacks would be made by tribal swordsmen. Within the camp the construction of shelter trenches and protective walls provided a partial solution to sniping and diminished the number of casualties amongst the combatant troops. However, the transport animals could not so easily be protected and suffered heavy losses, while the civilian followers took no precautions at all and had to be restrained from building fires that provided aiming marks for the snipers.[111] The lightly equipped and specially trained Gurkha Scouts, formed from men drawn the 3rd and 5th Gurkha Rifles, attached to the T.E.F., however, proved a highly effective solution to the problem by actively stalking the Afridi snipers harassing the camp.[112] Skirmishing with the Afridi and Orakzais lashkars made it readily apparent that the majority of the T.E.F. were considerably less efficient than the regiments who had hitherto monopolised the conduct of frontier warfare. Lockhart's Aide-de-Camp later observed: 'The great part of the Tirah Expeditionary Force… did not realise what it meant to be confronted by an active and agile enemy who knew every inch of his country and would be ready to seize every opportunity for turning the tables on his civilised foe.'[113]

The administrative and logistical problems involved in transporting and supplying two divisions with the requisite ammunition, food and supplies needed in the barren hills dictated the pace of the advance into Tirah. A week long delay was imposed in the Khanki Valley as the pack transport belonging to the 2nd Division

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[110] Col. C.E. Callwell, Tirah 1897, (London, 1911), p.64 and Field Marshal Lord Birdwood, Khaki and Gown: An Autobiography, (London, 1942), p.85

[111] Col. L. James, High Pressure: Being Some Record of Activities in the Service of the Times Newspaper, (London, 1929), p.34

[112] Lt.-Col. Sir F. O'Connor, On the Frontier and Beyond: A Record of Thirty Years' Service, (London, 1931), p.11

[113] Haldane, op cit, pp.107-8

crossed the Chagru Kotal, while tracks in the area were improved, new paths constructed and supplies of corn, straw, and wood collected by foraging parties from the surrounding area. The movement of masses of ponies, mules and camels across the border posed immense difficulties and the advance was further hampered by the poor quality of the animals and their equipment, as well as indiscipline amongst the hastily impressed civilian attendants. Supply columns moved across the passes in single file at a snails' pace into Tirah due to the poor state of the roads and animals and had to be heavily guarded from attack. It took the 20,000 pack animals and attendants over 48 hours of daylight to advance seven miles towards the Sampagha Pass along the Khanki Valley.[114] The Sampagha Pass was captured with relative ease on 29th October, after a bombardment by the largest concentration of mountain artillery ever used in frontier warfare, opening the route to Mastura Valley, but transport and supply problems slowed the advance leaving forward troops without tents or blankets for five days and nights.[115] A lack of resistance at the passes clearly indicated that the tribesmen had learnt that it was impossible to resist the combined strength of the punitive column in open battle without heavy casualties. Instead the lashkars waged guerilla warfare against the vulnerable columns of British and Indian troops melting away before determined attacks, pressing their attacks during withdrawals while all the time relentlessly harassing perimeter camps and convoys.[116]

The 2nd Division entered the Maidan Valley on 31st October 1897, confidently expecting that the Orakzais and Afridis would submit, now that British troops had penetrated to the heart of Tirah. The majority of the inhabitants had, however, fled with their livestock and valuables leaving behind their fighting men to contest the occupation of the area. Afridi and Orakzais jirgas were summoned to hear terms on 4th November, but lashkars continued to resist the Indian troops in Maidan exploiting the nullahs, ravines and rugged terrain in the area to make incessant small scale attacks. The perimeter camp at Maidan, containing the 2nd Division and a brigade of the 1st Division, was regularly sniped by Afridi riflemen. A

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[114] Gen. H. Smith-Dorrien, Memories of Forty-Eight Years Service, (London, 1925), pp.82-3
[115] Gen. Sir H. Gough, Soldiering On, (London, 1954), p.60
[116] Capt. L.J. Shadwell, Lockhart's Advance Through Tirah, (London, 1898), pp.11-12

steady toll of dead and wounded was inflicted within the encampment each night, requiring the hurried construction of elaborate field defences to provide some protection, whilst the Scouts stalked the marauders who had penetrated the outer ring of defences. The columns which moved out of Camp Maidan to destroy villages, conduct surveys and forage for food and fodder from the local area were harassed by snipers and were heavily attacked by Afridi lashkars once the withdrawal commenced at the end of each day. As the campaign progressed British officers widely admired the mobility and skilful skirmishing displayed by the Afridi warriors.[117] W. Birdwood observed: 'Certainly it is always an object-lesson to see Afridi skirmishers in action, unhampered by any equipment; the rapidity of their movements has to be seen to be believed. They just scatter and disappear, their astounding agility apparently quite unaffected by the steepness of the hillsides.'[118] The Afridis" guerilla tactics proved highly effective against the cumbersome columns operating in Maidan. Colonel T.H. Holdich observed:

> Afridi tactics by night were effective enough. They were almost more effective by day. Neither by night or by day would they trust themselves to open resistance or solid attack, but by day they could watch from their nests above the valley the scattered threads of transport moving in lines for foraging purposes, the little bands of scouts covering the survey party that was making its way slowly up the hillside, working its way comfortably within their range; or they could hang about the cliffs and woods whilst an advance in force was in progress, ready to mass themselves with most surprising rapidity on any luckless party that might get involved in the spider-web of nullahs. There was not an army of them. I doubt whether on any occasion their numbers could be actually counted into thousands. Certainly no British officer ever counted them. But this small brigade of bandits owed quite as much of their extraordinary mobility to the fewness of their numbers, as to their loose organisation and mountaineering instincts. They simply played around the British force, and with the facilities

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[117] Mills, op cit pp.119-20
[118] Birdwood, op cit, p.86

> with which they possess of attaining safe cover when too hard pressed, the hunting of them with an army of two divisions was not unlike hunting rabbits with a pack of foxhounds.[119]

The close-order formations used by imperial troops to move and fight - even companies in extended order had only had a gap of half a pace between each man - proved too large and conspicuous a target and were vulnerable to long range rifle fire. Easily identifiable British officers were singled out by Afridi snipers and suffered a high proportion of casualties during the campaign, materially reducing the effectiveness of some Indian units. Indeed it became a maxim amongst the British other ranks not to stand near officers or white boulders to avoid Afridi rifle fire as casualties mounted.[120] General Lockhart observed: 'Moreover, it must be noted that even at present the Afridis and Orakzais appear to be as well armed as our own native troops, they have ample supplies of ammunition, they shoot with remarkable accuracy and they are adepts in skirmishing and guerilla warfare. There are many pensioned or discharged officers and soldiers among them who doubtless impart the military training they have themselves acquired in the ranks of the Native Army.'[121] Words of command taken straight out of the Drill Book were heard on several occasions directing attacks on British troops while Afridi servicemen provided effective leadership and discipline and gave cohesion to the lashkars which considerably increased their tactical effectiveness during the campaign.[122]

The punitive and foraging operations mounted by 'flying columns' operating from Camp Maidan during November 1897 exposed poor leadership, insufficient training and limited knowledge about the peculiarities of hill warfare in both British and Indian regiments. It was rapidly apparent that the existing tactical training regimes were almost entirely inapplicable to the conditions faced on the frontier. As one officer noted:

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[119] Col. T.H. Holdich, The Indian Borderland, (London, 1901), p.362

[120] Lt.-Col. R.G. Thomsett, With the Peshawar Column, Tirah Expeditionary Force, (London, 1899), p.212-3

[121] G.O.C. T.E.F. to Foreign Secretary, 5th Nov. 1897, L/P&S/7/97

[122] A.H. Atteridge, The Wars of the 'Nineties. A History of Warfare in the Last Ten Years of the Nineteenth Century, (London, 1899), p.511

We at once found out the deficiencies of our peace training. In the first place the system of attack which we had taken so much trouble to learn was quite out of place in the hills. In the second place we had not been in action five minutes before we found that volley-firing was useless, for the targets never remained in position long enough for us to go through all the elaborate preliminaries. In the third place, companies, and even sections, had to a great extent fight their own battles, for it was impossible to supervise them, and sometimes even to see them; and lastly both officers and men were very much at sea in the skirmishing tactics which the ground made necessary… As regards the last, I must acknowledge that all were not tarred with the same brush, and some regiments, notably several belonging to the native army, were at home from the first… Tommy Atkins was nearly as clever a skirmisher, although hardly as agile as his Pathan Comrade. But of course while he was learning his business, the losses were both heavy and unnecessary, and this is certainly a reflection on our system of training.[123]

The broken terrain made the stereotyped system of attack and retirement laid down in the Drill Books of little use to British and Indian troops. Indeed, the system of collective fire control and discipline, based on carefully directed and controlled volley firing, proved singularly unsuited to fighting against widely dispersed Afridi skirmishers. In fact, it played directly into their hands on numerous occasions. Captain E.W. Maconchy graphically described the problems encountered on 21st December when the 21st Madras Regiment engaged the Afridis: 'Their fire discipline and the volleys were perfect but on the word "Ready" the Afridis would step out from behind the rock and get in two or three very accurate shots before the smoke of the volley disappeared when they stepped back under cover of the rock… This finally convinced me that volley firing was not the way to conduct hill fighting, however useful it may be against an enemy in the plains of India or even Europe.'[124] British and Indian troops were forced to acquire the skills of individual

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[123] Lt.-Col. G.F.R. Henderson, Technical Training of Infantry, (Dublin, 1899), pp.9-10

[124] Maconchy, op cit, pp.239-40

marksmanship and snap-shooting and to assimilate the lessons of frontier warfare during the course of the fighting in Tirah while opposed to the adept tribesmen.

The British and Indian troops operating in Tirah suffered a series of minor tactical defeats at Afridi hands due to a lack of disseminated knowledge of the principles and tactics of frontier warfare. During its withdrawal from Saran Sar ridge on 9th November, the 4th Brigade encountered serious difficulty when the rearguard, heavily encumbered with wounded, came under heavy attack at the end of the day's operations.[125] Colonel Chaytor, the Commanding Officer of the Northamptonshire Regiment, ignored the advice of experienced officers and withdrew two infantry companies from the crest without leaving a small party to cover their retirement. The retreating troops were caught on a congested mountain path by tribesmen on the crest above who were able to inflict heavy casualties on the troops as they attempted to join the main rearguard.[126] A small detachment wandered into a deep nullah during the confusion where they were killed by between 12-30 Afridis resulting in the loss of their Lee-Metfords and ammunition. A Court of Enquiry convened at Camp Maidan on 11th December to investigate the cause of the incident, concluded that the troops lacked training and experience in hill warfare and that both Brigadier Westmacott's and Colonel Chaytor's tactical dispositions had been poor.[127] The fault also lay with Brigadier Westmacott who had moved too far along the Saran Sar crest, delaying the entire day's operations and the later retirement to camp.[128] Sir William Lockhart, the Commander of the T.E.F., was more explicit and identified the root cause of the losses suffered by the Brigade during the engagement. He observed: 'I fully recognise that hill-fighting, especially in such difficult country as Maidan, is an art that can only be learnt by experience, and that British soldiers, especially those regiments that have not served before on the North-West Frontier, are at a serious disadvantage when opposed to Afridis, who are experts in guerrilla warfare, and who are lightly equipped

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[125] G.O.C. T.E.F. to Adj.-Gen. in India, 10th Nov. 1897, L/P&S/7/97

[126] Maconchy, op cit, p.225

[127] Military Department Despatch No. 4 of 1898: Enquiry into the circumstances attending the losses sustained by the Northamptonshire Regiment in Tirah, on the 9th November 1897, 4th Jan. 1898, L/MIL/7/15882 and Lockhart to Adj.-Gen. in India, 26th Jan. 1898, L/MIL/7/15887

[128] Lockhart to White, 16th Nov. 1897, White Mss, Mss.Eur.F.108/38

and fully acquainted with the ground they work over.'[129] The senior officers of the Northamptons simply lacked the training, experience, and practical knowledge of the tribesmen's methods and tactics that would have enabled them to withdraw successfully under attack through such difficult terrain.[130]

The military operations continued in Maidan during November, although the Afridis were unable to secure successes against better led, trained and increasingly more experienced troops. A force under the command of Brigadier A. Gaselee, an experienced 'Piffer', successfully reconnoitred the Saran Sar ridge on 11th November and conducted the operation with such skill it did not provide the tribesmen with an opportunity to inflict casualties on the column.[131] British regiments, however, were particularly vulnerable to tribal attacks during November, since both officers and men seemed incapable of adapting to the requirements of frontier warfare. Their lack of experience and training resulted in frequent tactical errors, which the watching tribesmen were ready and willing to exploit. For example, the 3rd Brigade was badly mauled during its withdrawal from Waran through the Tseri Kandao Pass to Camp Maidan on 16th November after the rear guard was heavily attacked by the Zakka Khel Afridis. The reinforcements sent out to aid the retirement were benighted in a small village and during the confusion half a company of the Dorsetshire Regiment wandered into a deep ravine and were overwhelmed by the tribesmen.[132] Such losses made it apparent that British junior officers and N.C.O.s urgently required some official guidance to prevent the repetition of similar incidents. Writing immediately after the fighting Sir William Lockhart complained bitterly: 'This is the second occasion on which a British regiment has shown its inexperience of hill warfare, the first during the retirement from the first reconnaissance of the Saran Sar heights, when a proportion of the 1st battalion, Northamptonshire Regiment, allowed itself to become isolated, entered a deep ravine, and lost heavily in consequence.'[133] The two British regiments that had been roughly handled by the Afridis on the 9th and 16th November were addressed

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[129] Gen. Sir W.S. Lockhart to Adj.-Gen. in India, 14th Nov. 1897. L/MIL/7/15882
[130] Col. H.D. Hutchinson, The Campaign in Tirah, 1897-1898, (London, 1898), p.124
[131] Gough, op cit, p.58
[132] G.O.C. T.E.F. to Foreign Secretary, 17th Nov. 1897, L/P&S/7/99
[133] G.O.C. T.E.F. to Adj.-Gen. in India, 20th Nov. 1897, White Mss, Mss.Eur.F.108/43

personally by the G.O.C. who attempted to pass on some of the lessons of frontier warfare to the troops. Lockhart pointed out the necessity of keeping in touch and choosing suitable ground when withdrawing in the face of a Pathan opponent and gave other hints regarding mountain warfare on the North-West Frontier.[134] The headquarters of the T.E.F. issued a memorandum on 18th November 1897 to every unit listing principles governing the conduct of rearguards that, in effect, constituted an ad hoc guide to the conduct of hill warfare.

> It must be remembered that the Force is opposed to perhaps the best skirmishers and best natural rifle-shots in the world; and that the country they inhabit is probably the most difficult on the face of the globe. The enemy's strength lies in his knowledge of the country, which enables him to watch our movements unperceived by us, and to take advantage of every rise in the ground and every ravine. Our strength lies in our discipline, controlled fire, and mutual support. Our weakness lies in our ignorance of the ground, and the consequent tendency of small bodies to straggle and get detached. The moral of this is that careful touch must be maintained; and, should small parties become isolated from any cause, instead of seeking shelter in ravines where they offer themselves as sheep to the slaughter, they must stick to the open as far as possible. It is to be hoped that we may have the opportunity of wiping out all old scores with the enemy before many days have elapsed, and meanwhile there is no occasion for us to be depressed because some of us have been outnumbered and overwhelmed by the enemy.[135]

Issuing such guidance to the troops during the course of fighting was an open admission that the regular British and Indian regiments lacked appropriate training for the operations in which they were engaged in Tirah. However, it is doubtful whether the memorandum had an appreciable influence on the conduct of the campaign and the regiments composing the T.E.F. were forced to acquire experience and

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[134] Gen. E.G. Barrow, 'Campaign Diaries', Barrow Mss, Mss.Eur.E.420/27, p.21, and Hutchinson, op cit, pp.146-7

[135] 'Field Force Memorandum', 18th Nov. 1897, White Mss, Mss.Eur.F.108/38

learn the lessons of hill warfare during the fighting, with the Afridis as their willing tutors.

The punitive operations against the Afridis continued after 18th November from a new base at Bagh, to inflict punishment on the remaining hostile sections. The government's terms were announced to the tribes on the 20th November, including a fine of 50,000 rupees, restoration of Government property, forfeiture of allowances and the surrender of 500 breech-loading rifles, but few attempts were made to comply. While awaiting a decision by the tribes, punitive operations in Maidan continued with columns moving to Dwa Toi and on 27th November, in co-operation with the Kurram Moveable Column, against the Orakzais and Chamkanni section inhabiting the western side of Tirah. A successful reconnaissance of Dwa Toi between 22nd-24th November was attributed directly to the skilful handling of the rearguard by Brigadier Westmacott and the growing experience of the mysteries of piqueting, perimeters and patrols amongst British officers, N.C.O.s and men acquired as the result of a hard month's practical experience in Maidan. It became apparent as the fighting continued that the majority of British and Indian troops had now learnt the appropriate tactics and defensive measures required for hill warfare and both the number of casualties and incidents declined. Such proficiency had, however, been dearly bought during the opening stages of the campaign when the tribesmen had been able to run rings around regular British and Indian troops.[136]

The T.E.F. began preparations to withdraw at the end of November despite continued Afridi resistance as the weather deteriorated and forage for the pack transport animals became scarce. Heavy baggage, surplus stores, and excess personnel were sent back to Shinawari while the main body prepared to withdraw north-west towards Peshawar District. The two divisions cut themselves free from their fixed line of communications and began to withdraw in two separate columns on the 7th-8th December 1897. The 1st Division moved unopposed down the Waran and Mastura Valleys, but the advance of the 2nd Division via Dwa Toi and the narrow Bara Valley, in constant contact with Zakka Khel lashkars, resulted in the heaviest fighting of the campaign. The 3rd Brigade came under accurate sustained sniper fire immediately after it left camp on 11th November from Afridis

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[136] Callwell 1911, op cit, p.105

armed with captured Martini-Henry and Lee-Metford rifles, who fired with deadly effect upon the vulnerable column of densely packed troops, camp followers and transport animals. The leading brigade withdrew its route piquets before the 3rd Brigade arrived making it necessary to replace these positions under heavy fire from the tribesmen, now using rifles firing smokeless ammunition, whom it was impossible to locate on the broken hill sides. Colonel R. Warburton noted: 'We were at the time under the cover of a high bank, and had no conception from where the bullets came or from what quarter the Afridi marksman fired his rifle. This is one of the advantages of your rifle with the smokeless powder falling into the hands of Jack Afridi… You are made to feel the bullet long before you hear the crack of the rifle.'[137] The time-consuming piqueting of the heights on either side of the route of march, together with driving snow, sleet and rain slowed the pace of the withdrawal, which became progressively disorganised as the straggling, unarmed and frozen camp followers tried in desperation to reach the safety of the perimeter camp established at Sher Khel. The heavily encumbered rearguard was forced to take shelter overnight in a nearby village unsupported by the main body of the brigade which reached camp apparently unconcerned about its comrades. During the heavy tribal attacks on 11th December a total of 41 troops and 100 followers belonging to the 3rd Brigade were killed or wounded, together with 150 baggage animals.[138] A series of desperate attacks on the 2nd Division and continual sniping continued for the next few days after the march resumed on the 13th December as the Afridis seized their last opportunity to oppose the heavily encumbered Indian troops. One correspondent graphically described the intense fighting during the retreat:

> Road there was none, but the river bed. For four days and nights it was an unbroken rearguard battle, and the masses of troops and transport were the constant mark and quarry of vicious snipers. At times the baggage train became an uncontrollable mass, more or less bogged in the rice fields that skirted the water-way.… Time and time again the situation

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[137] Col. Sir R. Warburton, Eighteen Years on the Khyber, 1879-1898, (London, 1900), p.307

[138] G.O.C. T.E.F. to Adj.-Gen. in India, 12th Dec. 1897, L/P&S/7/99

> became so critical that the Medical Officers marching with the wounded became combatants in hand-to-hand struggles. The rear-guard and flank-guards were fighting without respite from sun up until nightfall.[139]

During the withdrawal piquet and rear guard duties were particularly severe as the rearguard of the 2nd Division was constantly harried by large numbers of Afridis. Zakka Khel riflemen moving parallel along the hills, inflicted severe losses on the Indian troops, camp followers and animals from ranges of 1,800 yards using Lee-Metfords and ammunition captured during the campaign. The badly disorganised, haggard and gaunt troops of the 2nd Division finally joined the Peshawar Column at Swaikot on 14th December but had lost during the withdrawal a further 33 killed and 133 wounded.[140]

The Tirah campaign dragged on into 1898 while the Peshawar Column and the 1st Division carried out further operations against hostile Afridi sections inhabiting the Bazar Valley and Khyber Pass, while the 2nd Division reorganised within Peshawar District. Despite the destruction of houses, villages and large quantities of foodstuffs in Tirah, several Afridi sections continued to resist. When imperial troops reoccupied posts along the length of the Khyber Pass during January, Zakka Khel tribesmen inflicted a steady trickle of casualties.[141] Throughout the spring, desultory fighting continued while a settlement was negotiated at a series of jirgahs attended by Lockhart and tribal maliks. The premature retirement of a piquet resulted in heavy casualties amongst the 36th Sikhs and the King's Own Yorkshire Light Infantry at Shinkamar on 29th January 1898 after an order was misunderstood.[142] Moreover, while fighting continued against the Afridis, the Buner Field Force carried out a short-lived campaign against the Bunerwals culminating in an attack on the Tanga Pass, following which they rapidly submitted.[143] The threat of a renewed campaign in Tirah, however, finally led to a settlement with

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[139] James, op cit, p.43
[140] Thomsett, op cit, pp.146-7
[141] Foreign Department Despatch No. 25 of 1898 (Frontier): Punitive operations against the Tirah Afridis, 10th Feb. 1898, L/P&S/7/100, and Maj. H.C. Wylly,'Three Expeditions to the Bazar Valley', U.S.M., 19, (1899), pp.280-3
[142] Lt.-Gen. Sir A.P. Palmer to Chief of Staff, T.E.F., 31st Jan. 1898, L/MIL/7/15899 and Nicholson to Spenser-Wilkinson, 2nd March 1898, Spenser-Wilkinson Mss, M.O.D. 45
[143] See Maj. H.C. Wylly,'Our Dealings with the Boneyrwals', U.S.M., 20, (1899-1900), pp.268-77

the remaining hostile sections in April 1898, bringing active operations to an end. The T.E.F. was disbanded on 6th April, although three brigades remained near the Khyber Pass to ensure the final payment of outstanding fines. Despite its victorious end, the protracted and indecisive fighting had forcibly demonstrated that the Indian Army had much to learn regarding the conduct of military operations against a tribal opponent and that several trans-border Pathan tribes had acquired their own 'arms of precision' profoundly altering the conduct of mountain warfare.[144]

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[144] Foreign Department Despatch No. 69 of 1898 (Frontier): Settlement with the Afridis and the opening of the Khyber Pass, 5th May 1898, L/P&S/7/103

Chapter Three
A Doctrine for Frontier Warfare
May 1898- August 1914

The 1897-98 military operations exposed many defects in the organisation, equipment and training of the Army in India. During the most serious outbreak of resistance to British rule in India since the Mutiny, nearly the entire strength of the Field Army was mobilised, involving the deployment of over 59,000 regular troops, 4,000 Imperial Service Troops, and 118 guns in parts of the Pathan borderland that were still virtually terra incognita.[1] Imperial troops lost a total of 470 dead, 1,524 wounded and ten missing in action during the extended fighting, losses exceeding those suffered during the Second Afghan War.[2] Despite the benefits of modern military science: Dum-Dum bullets, machine guns, a rocket battery, field and mountain artillery, the large British and Indian force encountered serious, albeit unco-ordinated, resistance from the trans-border Pathan tribes. At the Malakand and at Chakdara imperial troops met tribal opposition similar to that encountered in prior campaigns, but the fighting against the Orakzais and Afridis had been markedly different. Indeed, it represented a new form of warfare never before experienced on the frontiers of India. The Tirah Campaign was the most difficult and protracted military operation carried out during the rising, despite initial expectations that British and Indian troops would only be opposed by lashkars still reliant on hand-to-hand combat supported by limited jezail or rifle fire. Major-General Sir William Lockhart summed up on 24th February 1898 the difficulties encountered by imperial troops:

> No campaign on the frontiers of India has been conducted under more trying and arduous circumstances than those encountered by the Tirah Expeditionary Force. Its operations have been carried out in a country destitute of roads, the physical configuration of which is such as to present the maximum of difficulty to the movement of regular troops. The enemy were for the most part

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[1] K.M. Saxena, The Military System of India (1850-1900), (New Dehli, 1974), pp.268-9

[2] Summary of Measures considered or carried out in the Military Department of the Government of India during the Viceroyalty of the Earl of Elgin and Kincardine, January 1895 to December 1899 (Calcutta, 1899), p.55 L/MIL/17/5/1616

skilled marksmen, exceptionally active and well armed and expert in guerilla tactics. While avoiding serious resistance to the advance of the troops they have lost no opportunity of harassing both on the march and in bivouac, a system of fighting admirably suited to the nature of the country, and which has necessarily occasioned us considerable loss, not only in action, but also from toil and exposure.[3]

The improvement in the military effectiveness of Afridi lashkars had been perhaps the most striking feature of the Tirah campaign. The large quantity of rifles captured by imperial troops and the surrender of further weapons as part of the political settlement, confirmed that in certain parts of tribal territory the size and quality of the tribal arsenal had dramatically improved.[4] Fighting in Tirah had graphically demonstrated the impact such 'arms of precision' had on the nature of frontier warfare, compounding the operational problems faced by regular troops operating in the border hills. During the withdrawal down the Bara Valley, the Zakka Khels Afridis' skilful use of a handful of captured Lee-Metfords indicated what might happen in the future if they obtained further supplies of magazine rifles firing smokeless ammunition. Writing to the Viceroy on 16th December 1897, Sir William Lockhart observed: 'When the number of long range breech-loaders in the hands of the Afridis shall have reached a higher figure than at present, I think that the next invasion of Tirah will be perhaps the hardest piece of work that troops could ever be called upon to undertake. It is the accuracy of the fire, not the number of rifles, that has caused my recent losses.'[5] However, few experienced officers realised the enormous difference that the acquisition of long range breech-loading rifles would have on tribal resistance or the numbers of weapons they had obtained. An enquiry conducted in the immediate aftermath of the fighting determined that the trans-border tribes possessed a total of 49,000 firearms, including 7,700 breech-loading rifles firing government-pattern ammunition. Moreover it indicated that the breech-

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[3] Adj.-Gen. in India to the Secretary to the Government of India Military Department, 24th Feb. 1898, L/MIL/7/15887

[4] Foreign Department Despatch No. 120 of 1899 (Frontier): Returns showing in detail the results of the examination of rifled arms surrendered by tribes on the North-West Frontier, 22nd June 1898, L/P&S/7/114

[5] Lockhart to Elgin, 16th Dec. 1897, Elgin Mss, Mss.Eur.F.84/71

loading Snider, Martini-Henry and Lee-Metford rifles in tribal hands had been obtained by capture or theft directly from the Indian Army, as gifts from the political department, by local manufacture using stolen components obtained from condemned government rifles or by means of an illicit trade in arms conducted in military cantonments throughout India during the 1890s.[6] It was perhaps ironic that the majority of weapons used so effectively against the Indian Army during 1897-98 had been obtained from the military and political authorities in India. With regard to the recent operations, Colonel T.H. Holdich observed in 1898:

> They have taught us something of the nature of that new phase of trans-border military existence, which is rapidly developing on our borders, i.e., the existence of a people brave and warlike (as, indeed they have ever been), becoming daily better trained and educated in military science, armed with weapons as good as ours, and just beginning to feel their way towards military combination under experienced leadership. All this puts an entirely new complexion on our little frontier fights of the future (for we cannot disarm them)… Nothing stands still in the evolution of time, certainly not the military development of the Afridi, the Swati, the Bonerwal, the Afghan or the Wazir; and it is probable that after recent experiences even the Baluchi will understand that a small, well-armed, and well-disciplined force is not to be annihilated by a mob, however brave. If we have purchased our recent experiences in Tirah somewhat dearly, we have at least secured much matter for useful reflection. Like the man in the fable who created a tiger, we have now to consider what to do with our creation.[7]

It soon became apparent that it would be impossible to control the traffic in arms effectively as new sources of supply replaced those within India.[8] Writing in September 1900, Lord Curzon observed: 'The fact is that, now that the Zulus and Matabeles have been subdued, and

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[6] The North-Western Frontier Arms Trade Committee to the Secretary to the Government of India Foreign Department, 18th April 1899, L/P&S/7/114

[7] Col. Sir T.H. Holdich,'Tirah', Geographic Journal, 12, 4, (1898), p.357

[8] See Foreign Department Despatch No. 147 of 1901 (Frontier): Measures adopted in view to stopping the illicit trade in arms and ammunition on the North-West Frontier, 29th Aug. 1901, L/P&S/7/136

that the Dervishes have been defeated in the Soudan, there are no first class fanatics left anywhere in the world except on the Indian frontier, and it is these individuals unfortunately who by theft, smuggling, and otherwise, are gradually acquiring an armament not greatly inferior to our own.'[9]

The Tirah Campaign had been fiercely criticised by the press in India and England surprised by the difficulties encountered by imperial troops and the heavy losses which were sustained.[10] One anonymous author summed up popular opinion: 'Tirah is but the history of a failure, redeemed by the gallant pluck and endurance of the fighting ranks and their officers.'[11] News of relatively minor tactical defeats was magnified out of all proportion by the popular press into major disasters for British arms and invidious comparisons were made between the Khartoum and Tirah campaigns, indicating that few observers appreciated the difficulties inherent in mountain warfare.[12] British and Indian regiments in Tirah had lost 87 dead and 853 wounded, representing the heaviest casualties suffered in the various operations conducted during 1897-98.[13] Such heavy casualties focused attention on the need for appropriate training and knowledge of hill warfare. Captain F.M. Edwardes observed:

> On the whole the losses which have been incurred are only the natural result of operations undertaken by an army, many units of which had had no previous experience of frontier warfare, and no corps of which had had experience of an exactly similar mode of warfare before. You can't make war without suffering losses. The fact is the British public, and the army also, have got so accustomed to the small and comparatively bloodless campaigns on the Indian frontiers that when a campaign of greater magnitude takes place, and we are pitted against foes who are above the average of frontier tribesmen, both in

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[9] Curzon to Hamilton, 4th Sept. 1901, Curzon Mss, Mss.Eur.F.111/160

[10] Hamilton to Elgin, 21st Jan. 1897 and 11th Feb. Elgin Mss, Mss.Eur.F.84/16, Elgin to Brackenbury, 23rd Jan. 1898, Elgin Mss, Mss.Eur.F.84/33a and Atteridge, op cit, p.533,

[11] 'Guerilla','The North-West Frontier', Imperial and Asiatic Quarterly Review, 8, 15, (1899), pp.42-3

[12] L. Oppenheim,'The Tirah and Khartoum Expeditions', Nineteenth Century, 44, 262, (1898), pp.1041-47 and James, op cit, p.vii

[13] Government General Order publishing numerical and amended nominal returns of killed, wounded, and missing in the Tirah Expeditionary Force from the 12th October 1897 to the 6th April 1898, 3rd June 1898, L/MIL/3/1082

> cuteness and arms, we find the game of war is not so easy as we have been accustomed to expect.[14]

The numerous 'petty mishaps' that had occurred in Maidan and elsewhere were primarily attributable to inexperience or a lack of more generally diffused knowledge and practice of the requirements of frontier warfare. As had been apparent during the Second Afghan War, apart from those British and Indian troops serving in mountain batteries, few regular units had had any specific training in mountain warfare unless they had fought in campaigns conducted during the 1890s. As a direct result of leaving frontier warfare as the sole prerogative of the P.F.F. during the late nineteenth century, appropriate training for military operations on the North-West Frontier had been neglected by the rest of the Army in India. Despite being officially part of the Bengal Army since 1886, the P.F.F. was still not prepared to share its knowledge with the regiments that had not served the same hard apprenticeship in the border hills. As Charles Callwell later observed:

> Mountain warfare was their business, and not that of the army of the "plains", to which they scarcely belonged. What wonder of the lessons learnt in the rough school of the Khyber Hills found no place in the training manuals, but were jealously guarded as trade secrets in the standing orders of the regiments and batteries?[15]

The sheer scale of the tribal risings, however, meant that the P.F.F. had been incapable of carrying out all the punitive operations, leading to the mobilisation of large numbers of regulars whose training had been predicated solely on the basis of conventional European warfare.[16] Despite the Standing Orders issued by the H.Q. of the T.E.F. at the beginning of the campaign and the rudimentary instruction while at Shinwari, casualties had been unnecessarily heavy as inexperienced troops violated the principles or ignored the elementary minor tactics required in tribal territory and got into

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[14] Capt. F.M. Edwardes, 'Recent Frontier Warfare', J.U.S.I.I., 27, 132, (1898), p.335
[15] Callwell and Headlam, op cit, p.266
[16] 'The North-West Frontier: By a Frontier Political Officer', I.A.Q.R., 5, 9, (1898), pp.5-6

difficulties. Writing in March 1898, the Chief of Staff of the T.E.F., Brigadier-General W.G. Nicholson, observed: 'In mountain warfare much has to be left to the judgement & capacity of officers commanding units or detachments, however small; and a petty mistake, such as the premature withdrawal of a piquet by the officer in charge of it, may produce the most serious results. In the present campaign the regimental officers have behaved as gallantly as was to be expected, but many of them were new to the game and did foolish things until they learnt wisdom by Experience.'[17] Whilst Gurkha, Pathan and Sikh troops recruited from hill districts were familiar with fighting in the mountains, it was apparent that British troops and Indian regiments recruited from the plains were out of place in the hills.[18] An absence of training was compounded by the fact that few British service officers were willing to take advice from experienced soldiers before the campaign began. Accordingly they suffered heavily at tribal hands before they learnt the principles and minor tactics of hill warfare established by P.F.F. regiments. Many senior officers who had fought in Tirah acknowledged that if they had had prior knowledge and training in mountain warfare at the beginning of the campaign many 'regrettable incidents' and casualties could have been avoided.[19] Sir George White, the outgoing Commander-in-Chief in India, commented on the lack of appropriate training for local Indian requirements in his farewell speech to the Indian Army on 21st March 1898:

> Although brilliant exceptions exist, the bulk of our infantry is insufficiently trained in the theory and practice of hill-warfare, the class of service for which the most constant and the most severe calls are made on our Army. It is true that at very many stations no ground exists where this can be practically taught, but there are others, especially those in the hills, where full opportunity for such training is afforded. In those latter cantonments the troops should be worked more consistently and for longer hours over the most difficult ground available, and practised in all the requirements and incidents in hill warfare, so that the

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[17] Nicholson to Spenser Wilkinson, 2nd March 1898, Spenser Wilkinson Mss, M.O.D. 45
[18] Atteridge, op cit, pp.533-4
[19] Maconchy, op cit, Vol. I p.222 N.A.M. 7908-62-1

> officers and men may not only be acquainted with the theory of hill-fighting, but may also be at all times kept physically fit for it by constant practice.[20]

Such views were shared by many British officers that had served in the recent operations. Indeed, the Tirah Campaign stimulated a debate on the tactics of hill warfare in India and a dramatic re-evaluation of British methods in the aftermath of the fighting.

The United Service Institute of India at Simla was at the forefront of the professional debate during 1898 regarding the perceived importance of appropriate training in frontier warfare. At a lecture on the lessons of the campaign attended by the Viceroy, the acting Commander-in-Chief in India and other senior members of the Government of India, Colonel H.D. Hutchinson, the Director of Military Training in India, called upon the institution to aid in collating the valuable experience gained during the 1897-98 operations in its annual essay competition, which could be incorporated as an appendix to a future Drill Book or in a manual devoted to hill warfare.[21] Such views were supported by the Military Member of Council, who urged the introduction of practical camps of exercise and training for both staff and men in the tactics developed by the P.F.F.. Major-General Sir E. Collen observed: 'If we are to really profit by the experience we have had, the great thing is to collect all the evidence we can, to sift it, and to apply the lessons we learn, so that those who run may read.'[22] The emphasis on training in the tactics of the Drill Book to the complete detriment of those required for mountain warfare was roundly condemned during the ensuing discussion. Major-General G. de C. Morton, the Adjutant-General in India, commented:

> It has always been a surprise to me that the authors of our drill-book have not devoted more attention and space to the tactical formations suitable to warfare with an uncivilised enemy. It will be within recollection of my military hearers that it was not until the introduction of the 1896 drill-book

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[20] Maj. A.C. Yate,'North-West Frontier Warfare', J.R.U.S.I., 42, 248, (1898), pp.1191-2

[21] Col. H.D. Hutchinson,'The Story of Tirah and the Lessons of the Campaign', J.U.S.I.I., 27, 132, (1898), p.243

[22] Collen, comments on Ibid, pp.255-6

that what is there termed 'Savage Warfare' is even alluded to, and even then only one page is devoted to it; now as we have in the last forty-two years, since the Crimean War, been engaged with no civilised enemy, but on the other hand have been engaged in constant conflict with uncivilised tribes in New Zealand, Abyssinia, in the Sudan, the Cape, India and elsewhere, it seems strange that what is our normal condition has received so little consideration at the hands of those responsible for our military training, for, though we are told on page 128 of the drill-book that formations are to be adopted with reference to the nature of the enemy and the manner in which he is armed, it follows that those formations cannot be carried out unless troops are trained in them in times of peace, and that is where I think the lecturer has made a point and called attention to a defect in our training.[23]

The J.U.S.I.I. provided the main forum for discussion regarding appropriate tactics and training for mountain warfare against the trans-border Pathan tribes. A series of articles were published written by British officers who sought to discern further lessons from the campaigns and to examine specific training required by British and Indian troops. These ranged from specific tactical proposals to detailed accounts of the recent operations intended to aid fellow officers.[24] An article written by Colonel H.A Pollock, based on twenty years of experience serving in the P.F.F. with the 1st Sikh Infantry, was published later the same year by the Institution as a pamphlet and sold at a price of two annas to British officers.[25] The U.S.I.I. quickly responded to the Director of Military Education's request and set the title of its 1898-99 influential prize-essay competition as 'The Tactical Principles and Details Best Suited to Warfare on the Frontiers of India.' It attracted a total of eleven entries from officers who had served during the 1897-98 campaigns and who were intimately acquainted with modern frontier warfare. Four essays were published between 1899-1900

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[23] Morton, comments on Ibid, pp.256-7

[24] Lt.-Col. H.A. Pollock,'Notes on Hill Warfare', J.U.S.I.I., 27, 131, (1898), pp.131-47, R.C.,'Proposal for Infantry Attack in Mountain Warfare', J.U.S.I.I., 27, 132, (1898), pp.479-80, and H.T. Kenny,'A German Account of the North-West Frontier Campaign', J.U.S.I.I., 27, 132, (1898), pp.481-98

[25] Lt.-Col. H.A. Pollock, Notes on Hill Warfare, (Simla, 1898)

providing a detailed survey of the conduct of warfare along the extensive frontiers of British India. These contained detailed information regarding tribal territory, its inhabitants and the conduct of operations for all three arms of service against tribesmen armed with modern rifles. Moreover, they also provided information regarding military operations in the jungles and bush of the North-Eastern Frontier against opponents very different from the trans-border Pathans.[26]

The service press was complemented by a series of books written by war correspondents, many of whom were serving officers, who had accompanied the various punitive expeditions and sought to extrapolate detailed lessons from the conduct of the campaign.[27] Captain L.J. Shadwell, former correspondent of the *Pioneer* and *London Daily News*, made direct comparisons between European and frontier warfare in a detailed didactic account of the Tirah Campaign written aboard ship while returning to England.[28] The clamour for a source of practical guidance prompted the publication of several unofficial text books on the conduct of military operations on the frontier, which formed a valuable stop-gap for imperial troops until the military authorities in India could officially respond. Those books and pamphlets published in England and India during 1898-99 took widely differing approaches ranging from detailed descriptions of tactics required across the border to more ambitious attempts to discern wider principles governing the conduct of 'savage warfare' throughout the British Empire. Captain G.J. Younghusband's *Indian Frontier Warfare*, written before the 1897-98 campaigns, was largely based on experience gained between the Second Afghan War and Chitral Campaign. Though of considerable interest with regard to general information regarding the conduct of military operations along India's extensive frontiers, it did not discuss the implications of 'arms of precision' on hill warfare in any depth. The preface,

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[26] Col. J.P.C. Neville,'The Tactical Principles and Details Best Suited to Warfare on the Frontiers of India', J.U.S.I.I., 28, 136, (1899), pp.191-223, Lt.-Col. H.H. Hart,'The Tactical principles and Details Best Suited to Warfare on the Frontiers of India', J.U.S.I.I., 28, 136, (1899), pp.244-72, Capt. E. Peach,'The Tactical principles and Details Best Suited to Warfare on the Frontiers of India', J.U.S.I.I., 28, 137, (1899), pp.329-60, and Lt.-Col. J.G. Ramsey,'The Tactical principles and Details Best Suited to Warfare on the Frontiers of India', J.U.S.I.I., 29, 138, (1900), pp.85-110

[27] Lt. W.L. Churchill, Story of the Malakand Field Force. An Epitome of Frontier Warfare, (London, 1898), pp.283-301 and Hutchinson, op cit, pp.224-46

[28] Shadwell, op cit, pp.88-107

written by the Editor of the Wolseley series and a leading 'crammer', Captain W.H. James, reflected contemporary wisdom regarding colonial warfare prior to the 1897-98 campaigns: 'Strategy is the same, whether used against Arabs or Frenchmen. The tactics differ as the weapons of the enemy differ. But the soldiers trained to meet the highest class of opponents are, *ipso facto* better qualified to deal with the inferior.'[29] However, the majority of the books and pamphlets published in India were more up-to-date, reflecting an important awareness of the new conditions of frontier warfare. In the preface to a small manual on hill warfare published at Allahabad in 1898, Brigadier-General C.E. Egerton noted that there was little new in his guidelines:

> It is not claimed that these notes contain anything new or original, they merely comprise in a collected form the tactics which experience of others has found it best to adopt in the various situations which arise in the course of frontier expeditions, and are contained in some form or other of the Standing Orders of the Regiments of the Frontier Force, the conditions of service in which embrace wide opportunities for the study of this special subject. It is hoped that by placing the results of this experience in a collected form, some of the mistakes which so commonly occur in regiments which have no previous experience in hill warfare may be obviated.[30]

Lieutenant-Colonel A.R. Martin's small pamphlet, entitled 'Mountain and Savage Warfare', followed a similar vein, containing little more than a brief resume of skirmishing, piqueting and the other minor tactics that had been so successfully employed by the 5th Gurkha Rifles during repeated punitive expeditions on the Frontier during the nineteenth century.[31] However, several officers were more ambitious and went further in their analysis of the recent operations. In a larger volume, Captain E.A. Peach postulated the existence of distinct principles underlying the conduct of 'savage' warfare throughout the British Empire and suggested that they were

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[29] Capt. and Brevet Maj. G.J. Younghusband, Indian Frontier Warfare, (London, 1898)
[30] Brig.-Gen. C.E. Egerton, Hill Warfare on the North West Frontier of India, (Allahabad, 1899), p.1
[31] Lt.-Col. A.R. Martin, Mountain and Savage Warfare, (Allahabad, 1898), 2nd ed. 1899

best illustrated in hill warfare, which he regarded as the most difficult of all such operations. He divided the subject into 'savages' armed without arms of precision and those armed with rifles. Regarding the latter he noted: 'In this group we have conditions approaching more closely to those of warfare against regular troops. And they are conditions that we may expect to meet more and more in the future. For even savages march with the times, and we have had experience lately of how soon they learn to appreciate the power of long range and accurate weapons.'[32] A comparative approach to the subject was taken by Major E.H. Rodwell, who discussed both 'civilised' and 'savage' warfare in a collection of essays that made wide use of historical examples from military operations on the frontier.[33] The dearth of general information available to British units regarding the frontier and its inhabitants was particularly noticeable, however, during the autumn of 1897. Lieutenant-Colonel F.H. Plowden, the Commanding Officer of the 2nd Battalion Oxfordshire Light Infantry, wrote a short guide for regiments new to the border containing general information and guidance regarding the appropriate tactics required against the trans-border Pathan tribes and operations in tribal territory. It included sections on camps, transport, marches, convoys, advanced guards, rear guards, attacks, piquets, retirements and other details regarding the conduct of mountain warfare.[34]

The books, pamphlets, lectures and essays written by serving British officers after the Tirah Campaign shared common themes and ideas ranging from criticism of the Drill Book to detailed prescriptions of tactics and training required for 'savage' warfare. The 1896 Drill Book was condemned by the majority of authors with regard to its emphasis on frontal attacks, volley firing, quarter-columns and apparent disdain for cover as these were irrelevant to Indian troops fighting in tribal territory. The tactics of conventional European warfare and the formations recommended for 'savage' warfare against opponents armed with close-quarter weapons in open terrain were condemned as clearly inappropriate for operations on the Indian frontier. Although the Drill Book did allow considerable latitude in terms of the deployment of troops and

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[32] Maj. E. Peach, Handbook of Tactics for Savage Warfare, (Allahabad, 1898). 2nd ed.
[33] Maj. E.H. Rodwell, Four Bangalore Lectures, (Lahore, 1899)
[34] Lt.-Col. F.H. Plowden, The Battalion on the Frontier, (Lahore, 1899)

stressed general principles which were applicable to all forms of war, commentators agreed it contained insufficient guidance in the special military conditions encountered by Indian troops in mountainous terrain. All agreed that some form of special guidance was required for imperial troops in the principles and minor tactics of hill warfare, although, whether that guidance should appear as an integral part of a new edition Infantry Drill or as an Indian supplement remained a subject of discussion. The vast majority of the tactical proposals appearing in the military press were classic re-statements of the principles known and practised on the frontier by the P.F.F. since 1849, although there was some discussion on various minor tactics on the frontier. The intricacies of piqueting, perimeters and patrols had to be disseminated amongst the regiments of the regular British and Indian armies during peace time. Training was deemed of special importance since operations in tribal territory threw such responsibility on junior officers and N.C.O.s. Indeed, a faulty piquet position, a badly placed sangar, or the clumsy handling of a small body of troops in retirement by a junior officer or N.C.O. during the 1897-98 operations had often been the cause of unnecessary and heavy loss of life. The value of the tactical and operational lessons derived from prior campaigns, known to the officers and men of experienced frontier regiments, was widely acknowledged. Regular troops had, for example, to be taught that attacks had to be mounted along the crests of converging spurs rather than in ravines where they would themselves be vulnerable to attack. In particular, guidance was required in respect of the tactics developed to ensure the all-round security of a column on the march or while halted when operating in tribal territory. The conduct of a withdrawal in contact with hostile tribesmen obviously also merited special attention following the repeated Afridi successes in Tirah Maidan. Major A.C. Yate summed up the opinion of many officers when he launched a scathing attack on the failure of the military authorities to provide an official training manual for either 'savage' warfare in general or Indian frontier warfare in particular. Referring directly to the operations carried out by the T.E.F. he observed that:

> Our best frontier officers and soldiers found themselves foiled and at times worsted by these unorganised guerrillas. Surely the inference to be drawn from this is that in the future Her

Majesty's officers and soldiers must be systematically educated to meet these foes. It is not a matter to be left in the hands of irresponsible and unofficial essayists… A manual of instruction for uncivilised warfare is required. Her Majesty's troops, and more especially those stationed in India and in our colonial possessions should be instructed and practiced, not only in the exercises and manoeuvres prescribed for modern European warfare, but also in the irregular methods of fighting which must be adopted against uncivilised races.[35]

The acquisition of 'arms of precision' and large quantities of ammunition by the trans-border Pathans necessitated important modifications to the principles of hill warfare developed by the P.F.F. during the nineteenth century. When jezails had formed the main firearm used by the Pathans, tribesmen had had to approach Indian columns to relatively close proximity and, each time they fired, their position had been marked by a puff of black powder smoke. Now, when tribesmen used rifles firing smokeless ammunition, their positions were masked, making it difficult to mount outflanking or direct attacks until they could be located. Piquets, responsible for the protection of columns on the move and in encampments at night, now had to be positioned over 1,500 yards from the main body in order to ensure their protection from long range Martini-Henry and Lee-Metford rifle fire. During the Tirah Campaign, however, it had also been found possible to reduce the strength of piquets from a company to 10-12 men, as tribesmen armed with modern rifles appeared unwilling to mount determined hand-to-hand attacks en masse. A single determined marksman could now impede the passage of an entire column through tribal territory and inflict significant casualties on both the troops and the vulnerable transport animals on which they depended. The vulnerability of perimeter camps to long-range sniping had been graphically demonstrated during the Tirah campaign, but continued attacks by tribal swordsmen indicated that they could not be abandoned, forcing troops to attempt to augment the defences surrounding and within the encampments to shield themselves from rifle fire.

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[35] Yate, op cit, p.1191

The attack at Dargai had graphically illustrated what could be expected when too closely grouped tactical formations were opposed by resolute tribesmen armed with modern rifles. Open formations proved indispensable throughout the fighting in Tirah. The necessity of greater tactical dispersion on the battlefield and increasing initiative, self reliance, skill and intelligence on the part of the troops in the field during attacks and retirements in the face of a tribal opponent, was evident. When opposed by some of the finest light infantry in the world, British troops had to re-discover light infantry skills that had largely been forgotten by regular troops. The importance of skirmishing on the mountain sides by well trained marksmen, making careful use of the ground for cover and concealment, when fighting Pathan lashkars was recognised. Unfortunately, the section on skirmishing had been removed from the training manuals since the 1892 edition of the Drill Book. Individual and small unit training therefore became the key to tactics in hill warfare as soldiers moved out of the direct command of their officers. In a general engagement, fire and manoeuvre was vital as the widely extended troops worked their way up the hill sides covered by their fellow infantry and the firepower of the mountain artillery. The efficacy of a flanking movement combined with a frontal assault against 'savage' opponents was reiterated again and again in order to exploit the lack of discipline and cohesion amongst Pathan lashkars. The range of modern rifles meant flanking attacks had to be mounted over wider frontages than before, becoming increasingly difficult and time consuming. Scouts, or skirmishers, would be deployed before the advancing main body, although close order formations and cold steel still remained essential in the final stages of an attack when it was possible tribal swordsmen might counter-attack. In addition, modern rifles compounded the difficulties encountered during withdrawals in contact with hostile tribesmen, increasing the number of casualties and making it difficult to break contact with the enemy.[36]

The system of musketry training used by British and Indian troops was heavily criticised after its limitations had been exposed during the fighting, when Afridi tribesmen had demonstrated their superior marksmanship. Captain A.A. Campbell later observed: 'Trained as our soldiers were to fire volleys exclusively, they proved that

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[36] Peach 1899, op cit, p.344

the excellence of their fire discipline and the deficiency in the system of their education, by omitting to load and fire except by word of command in a country and against an enemy and on occasions, when the volley was precisely not the description of fire to employ.'[37] The collective system of volley firing and musketry was condemned in light of its obvious limitations against dispersed tribal skirmishers who presented fleeting targets to the infantry, and it became evident that Indian troops had to develop new systems of musketry training. Volley firing had to be replaced by individual marksmanship for which British and troops armies were not trained. The Tirah campaign led to the introduction of highly realistic live-firing exercises over broken, hilly terrain which placed emphasis on long range fire, snap-shooting and firing at moving targets. As one commentator observed: 'The first and main point to be attended to in the training of troops for frontier warfare is musketry instruction. To meet the frontier tribes on their own ground and in accordance with their methods of fighting, we require an army of skilled marksmen.'[38]

The Gurkha Scouts, composed of specially selected men, trained and led by Lieutenant C.G. Bruce, had proved so successful during the fighting in Tirah that the formation of permanent specialist light infantry units in India organised, trained and equipped solely for hill warfare was widely discussed.[39] The results achieved by the Scouts in Tirah, 120 men and three officers, had been far out of proportion to the size of the force and prompted General Sir William Lockhart to declare: 'During the present expedition the scouts drawn from the 3rd and 5th Gurkhas have proved specially valuable. Being trained mountaineers and accustomed to guerilla warfare, they were able to climb the most precipitous hills, lie in ambush at night, and surpass the tribesmen in their own tactics.'[40] An additional battalion of Scouts had been requested as reinforcements during the campaign and, in January 1898, Captain Lucas had been despatched to Abbottabad to select 500 men from the 5th Gurkhas, who were specially

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[37] Capt. A.A. Campbell,'The Limitations of Infantry Fire Control and Discipline', J.U.S.I.I., 330, 143, (1901), p.120

[38] Neville, op cit, pp.219-20

[39] Finance and Commerce Department Despatch No. 275 of 1898: Proposal that Lieutenant the Hon'ble C.G. Bruce, Adjutant, 1-5th Gurkhas, should be granted compensation for the loss of half staff pay as Adjutant, while employed with the Gurkha scouts, Tirah Expeditionary Force, 8th Sept. 1898, L/MIL/7/15916

[40] Gen. Sir W.S. Lockhart to the Adj.-Gen. in India, 26th Jan. 1898, L/MIL/7/15887

armed with Lee-Metford rifles.[41] The term 'scout' was essentially inaccurate, however, since these troops had acted as skirmishers, pursuing and engaging the tribesmen on their own terms, and had ignored conventional scouting duties. Debate within the Indian Army focused on the organisation best suited for scouts in the future: complete battalions, light companies, or individual men within each unit. The inherent difficulties involved in raising and maintaining British scout battalions were rapidly appreciated because of short service, the interchange of units between stations throughout the Empire and the necessity of having to rotate units between the plains and the hills because of the climate.[42] Similar problems were not so apparent for Gurkha or Indian troops who were normally stationed in India throughout their service. The importance of trained scouts, within each battalion, in hill warfare became widely recognised, but their training remained a bone of contention, especially in light of the later experiences during the Second Boer War.[43]

The lessons regarding weapons and equipment carried by the infantry were also carefully considered after the Tirah campaign. The large scale of heavy personal equipment carried by individual regular soldiers - boots, ammunition, great coats and rations - attracted considerable criticism and prompted attempts to reduce the amount carried by each man in the field, although it was apparent that regulars would never be able to match the mobility of lightly clothed tribesmen carrying nothing but a rifle, a few cartridges and food. During the campaign the effectiveness of Lee-Metford rifles, now firing Dum-Dum pattern expanding ammunition had been confirmed. However, captured ammunition was used with equally deadly effect against imperial troops, demonstrating the shattering effects it had on a human body.[44] An attempt to prohibit its use, however, following the 1899 Hague Conference which had banned its used in European warfare, prompted the military authorities in India to mount a

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[41] Lockhart to White, 16th Nov. 1897, White Mss, Mss.Eur.F.108/38, and Deputy Secretary to the Government of India, Military Department to the Adj.-Gen. in India, 7th Feb. 1898, L/MIL/7/15886

[42] Anon.,'The Gurkha Scouts', Blackwood's, 165, 502, (1899), pp.802-15, Peach 1899, op cit., pp.332-4, and Ramsey, op cit, p.109

[43] Capt. R.G. Burton,'Shikar as Training for Scouts', 28, 134, J.U.S.I.I., (1899), pp.88-90 and. R.D. Alexander,'A System of Training Scouts for Hill Warfare', J.U.S.I.I., 33, 157, (1904), pp.397-406

[44] Principal Medical Officer, Army Staff, Tirah Expeditionary Force, to the Principal Medical Officer, Her Majesty's Forces in India, 10th March 1898, L/MIL/7/12026

vigorous defence, arguing that such ammunition was essential against 'fanatical savages' who did not recognise the laws of war and mutilated Anglo-Indian casualties.[45] A quantity of Mk II Indian Pattern ammunition was manufactured in India and retained specifically for use in 'savage warfare' on the North-West Frontier, although in 1902, after the War Office had decided to discontinue its use, it was agreed that such ammunition should not be issued to troops on active service.[46] Ten million rounds of 'unmade up' ammunition was, however, later manufactured and kept in reserve in Indian arsenals, following requests in 1903 for Dum-Dum ammunition for use in Somaliland.[47]

The Maxim machine guns, which equipped British regiments and various posts, had once again failed to have any significant impact on the fighting, due to their heavy weight, unsuitable carriages and the dispersed fighting formations employed by lashkars. They had, however, proved useful on a few occasions. At Chakdara on 2nd August 1897, for example, they had inflicted heavy casualties on the tribesmen attacking the fort.[48] Additionally, when employed en masse during deliberate attacks, such as at Landakai and the Bedmanai Pass during the Mohmand expedition, they proved effective, but more generally they were restricted to the defence of fixed posts and perimeter camps.

The mountain artillery provided invaluable close support to the infantry throughout the fighting and were used, in particular, to suppress the fire of tribal riflemen. However, the short range of the guns employed, less than 500 yards, made them vulnerable to tribal riflemen during withdrawals, when most of the fighting took place.

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[45] Military Department Despatch No. 90 of 1900: Patterns of bullet for .303, inch arms to be manufactured in future, 28th June 1900, Military Department Despatch No. 149 of 1900: Reserves of ammunition to be maintained in India. Proportion of bullets of Indian pattern, 11th Oct. 1900, Military Department Despatch No. 81 of 1901: Retention in regimental charge of ammunition with Mk II, I.P bullets at certain stations near the North-West Frontier of India, 13th June 1901 L/MIL/7/12030 and Officiating Adj.-General in India to Secretary to Government of India, Military Department, 2nd March 1901, L/MIL/3/157

[46] Military Despatch No. 96 to Governor-General of India in Council, 16th Aug. 1901, Military Despatch No. 175 to Governor General of India in Council, 12th Dec. 1902 and Maj. F.W. Cardew, Deputy Secretary to Government of India Military Dept. to Adj.-Gen. in India, 5th Aug. 1902 L/MIL/7/12030

[47] Military Department Despatch No. 152 of 1903: Manufacture and maintenance of a reserve of ten million .303" mark II, I.P. bullets, 20th Aug. 1903 and Military Despatch No. 122 to Governor-General of India in Council, 2nd Oct. 1903 L/MIL/7/12030

[48] Capt. M.E. Carthew Yorstoun,'Machine Guns', J.U.S.I.I., 27, 131, (1898), pp.208-19, and Lt. H.P. de la Bere,'With Machine Guns in Tirah', U.S.M., 19, (1899-1900), pp.165-72

The 2.75 inch mountain artillery gun, had been heavily criticised following the Tirah Campaign due to its inability to suppress Pathan riflemen during the attack at Dargai on 20th October 1897, despite having fired over 1,300 rounds during the engagement. The flat trajectory and the light weight of its shells made them ineffective against sangars or dispersed tribesmen taking advantage of rocks, boulders and crevices for cover.[49] At the Sampagha and Arhanga passes, batteries were used for the first time en masse, but it was doubtful whether they had much effect on the scattered defenders. Most mountain artillery batteries had been broken down into small sections, usually of two guns, which were parcelled out to the foraging and reconnaissance parties operating in Tirah. An increase in the number of batteries in India was requested following the fighting since it was apparent that they had represented the only distinct technological advantage enjoyed by Indian troops operating in tribal territory. The Government of India observed in February 1898:

> The part played by mountain batteries in operations against frontier tribes is one of great and increasing importance. We have found that these tribes can, and do, obtain breech-loading rifles of modern type which they know well how to use, and though we may hope to check the passage of arms across the frontier, it is not likely we shall be able to suppress it altogether, or prevent the tribesmen in future from obtaining arms in some manner or other. They have, however, no artillery, and cannot become possessed of it, and increase in the number of mountain guns will therefore be of distinct value in the maintenance of our position on the frontier.[50]

The following year these same arguments were re-emphasised when a further battery was added to the Indian establishment.[51]

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[49] Capt. G.F. MacMunn,'The Artillery at Dargai', Proc. R.A.I., 25, (1898), pp.173-78

[50] Military Department Despatch No. 31 of 1898: Addition of another Battery of Native Mountain Artillery to the Establishment of the Army in India, 24th Feb. 1898 and Maj.-Gen. G. de C. Morton, Adj.-Gen. in India, to the Secretary to the Government of India, Military Department, 3rd Jan. 1898, L/MIL/7/10133

[51] Military Department Despatch No. 194 of 1899: Improvements in the organisation of the horse, field, and mountain, batteries on India, 2nd Nov. 1899, L/MIL/7/10139

The mountain artillery had been supplemented by an improvised Hale's rocket battery was also hurriedly formed at the request of Sir William Lockhart and was also used at Dargai and Kharappa, but its rockets had more of a moral than material impact and considerable difficulty was found firing them accurately at long ranges. Conventional wheeled artillery batteries were also used against the tribes wherever possible. At the beginning of the campaign four guns of the 51st Field Battery had helped to repel the attack at Shabkadr, and other batteries were employed inside the administrative border. The 10th Field Battery penetrated deep into the border hills during the Malakand campaign where its heavy guns were used with great effect against the tribesmen unaccustomed either to their range or the power of their shells. An improvised elephant battery equipped with 12lb B.L. guns was also formed at Peshawar in case the T.E.F. required heavy fire support in areas inaccessible to wheeled artillery, although this was never deployed.[52]

The 1897-98 operations had demonstrated once again the fact that, except in the wide Kurram, Panjkora and Swat valleys, cavalry had a limited role in hill warfare due the mountainous terrain. During the fighting at Chakdara and the Malakand large numbers of tribesmen were caught in the open by Indian cavalry on several occasions and the continued psychological value of mounted shock action against men unaccustomed to horses had been demonstrated. The value of the arme blanche during these engagements had been reaffirmed, although the cavalry proved increasingly vulnerable to long-range rifle fire. As a result dismounted fire action began to replace traditional cavalry tactics in the hills, although cavalry was used to maintain the security of the line of march in British and Indian columns, for liaison duties, and on occasion, mounted charges. The weakness of dismounted cavalry armed with carbines against tribesmen equipped with rifles, however, had been displayed during the operations in Bajaur in the Watelai Valley when tribal riflemen had engaged them from long range without reply. During the fighting in the Kurram Valley, the Central India Horse and 6th Bengal Cavalry fought on foot during the defence of Sadde camp, and it had once

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[52] Capt. G.F. MacMunn,'The Artillery in the Indian Campaigns of 1897-8', Proc. R.A.I. , 26, (1899), pp.229-42, Lt. C.B. Ballard,'The Diary of the 10th Field Battery R.A., with the Malakand Field Force', Proc. R.A.I., 25, (1898), pp.419-38 and Lt. E.F. Delaforce,'Experience of the 10th Field Battery R.A. in the Malakand and Bunerwal Expeditions', Proc. R.A.I., 26, (1899), pp.561-8

again become apparent that a better weapon than the short Martini Henry carbine was required against opponents armed with rifles. A single squadron accompanied the T.E.F. when it advanced into Maidan, which was soon relegated to the lines of communication as the terrain and the skirmishing tactics used by the Afridis limited the opportunities when it could be used with effect.[53]

The lessons learnt in the Mamund Valley and Tirah Maidan were also discussed in the military press in England, with regard to the provision of appropriate training and also in terms of the experience gained from fighting against opponents armed with small-bore, long-range magazine rifles firing smokeless ammunition. Indeed, the Tirah campaign provided a valuable first source of information regarding the impact of the 'second firepower revolution' on the conduct of warfare in general, and was eagerly studied by military theorists in England. In a lecture at the R.U.S.I. in October 1898, Major A.C. Yate launched a scathing attack on the failure of the military authorities to provide any instruction in North-West Frontier warfare or 'savage warfare' in general.[54] After discussing at length the changed nature of frontier warfare and the merits of the various books and pamphlets published since 1898 in India and England, he observed:

> An officer has only two means of acquiring experience in frontier warfare, viz, by personal active service, and by study… No manual of instruction in this class of warfare exists. The libraries of the Indian United Services Institutions are not within reach of one officer in a hundred. The officer who desires to study Indian Frontier Warfare must make his own library at great trouble and expense (for the books are now mostly scarce and costly), and that not one officer in thousand can or cares to do. It is for the War Office to produce a good manual on "Savage Warfare", and bracket it with the other indispensable text-books with which every officer ought to be conversant.[55]

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[53] Capt. W.B. James,'The Training and Equipment of Cavalry and Mounted Infantry in India and their Respective Roles in War', J.U.S.I.I., 32, 150, (1903), pp.34-76, and Capt. D.C. Crombie,'Cavalry in Frontier Warfare', J.U.S.I.I., 39, 178, (1910), pp.109-18

[54] Yate, op cit, pp.1171-93

[55] Ibid, p.1182

At the R.U.S.I. in October 1899, Major-General Sir William Gatacre argued that British troops in England should be instructed in the requirements of Indian hill warfare and emphasised the wider value of the skirmishing tactics used on the North-West Frontier. Although he was a firm advocate of specialised training, he believed that the recent experience should be applied to the existing Drill Book rather than devising special forms of drill for hill warfare.[56] The ensuing discussion revealed much about current attitudes in England towards the provision of manuals and training specifically for colonial warfare. The indefatigable Lieutenant-Colonel F.C. Carter urged the military authorities to make fuller use of the facilities in England to train regiments preparing to serve in India, suggesting that suitable terrain existed near Aldershot where 'semi-civilised and savage wood and mountain warfare could be carried on'. Moreover, he complained that the Staff College at Camberley completely ignored colonial warfare before concluding:

> One would think that the British Army was every year engaged in fighting nothing but European foes. It is, however, very nearly half a century since we fought in Europe; whilst every day along the marches of our vast Empire the British soldier and his dusky companion in arms is fighting across mountains and deserts and through jungles and swamps, and it is training for that kind of fighting which we want for Tommy Atkins and his officers, as well as for our native troops.

General Sir J.J. Hood Gordon, the chairman of the meeting, concurred with Gatacre's views regarding the value of the existing Drill Book and concluded: 'I believe thoroughly in our Drill-Book. Its principles, when properly applied, suffice for the world-wide field which the British Army is constantly called on to act in. We do not require forms or rules; principles are the only guide in war, and we

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[56] Maj.-Gen. W.F. Gatacre, 'A Few Notes on the Characteristics of Hill-Fighting in India, and Training of Infantry Necessary for same Possible in England', J.R.U.S.I., 43, 260, (1899), p.1066

must fit them to the locality or enemy. We must study our enemy and his country. Each tribe, each clan, has its characteristics and special tactics, and a knowledge of these is half the battle.'[57]

The Drill Book was also strongly defended by other influential officers in England, aware of the growing pressure for amendments containing guidance for colonial warfare. At a lecture held by the Military Society of Ireland in March 1899, Lieutenant-Colonel G.F.R. Henderson, Professor of Military History at the Staff College, stressed the wider significance of the lessons gained from fighting the Afridis, in a campaign against Russian troops in Afghanistan. Additionally he defended the value of the existing Drill Book by emphasising its general importance for training of the British Army throughout the Empire:

> When troops find themselves on service under conditions with which their ordinary training has done nothing to familiarise them, and to which their ordinary formations are absolutely inapplicable, a cry is once more raised against the Drill-book. We have all heard it. At one time, when the losses in desert fighting have been severe, it has been, "Why does not the Drill-book teach us something about savage warfare?' At another, when the foe has been a mountaineer, "Why does not the Drill-book teach us how to fight in the hills?' The next time it may be, "Why does not the Drill-book teach us how to fight in the jungles of Africa, or in the swamps of China?" I think, however, that by anyone who looks at it as a whole, and not as a single campaign, the constant variety of ground, of climate, and of tactics, such complaints against the official teaching will hardly be approved. The Drill-book does not pretend to be an exhaustive tactical treatise. It is nothing more than a compendium of tactical principles adopted to almost every kind of warfare. They lay down a few rules for the most difficult of all operations, the attack and assault of a defined position over open ground, but that is all. It does not attempt to show how these rules must be modified under other conditions, for these conditions, as I have already said, are so infinitely

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[57] Ibid, pp.1080-1

> diversified that it would be impossible in one volume to deal with them in detail.[58]

Despite such strong opposition, the importance of officially sanctioned training and guidance was supported by other officers in England. A second revised edition of *Small Wars: Their Principles and Practice*, published in 1899, included a detailed chapter on hill warfare for the first time, based on information derived from the numerous books and pamphlets produced in India. Major C.E. Callwell acknowledged that hill warfare was a distinct form of military operation and joined in the growing clamour for both practical and theoretical instruction, after praising the first hesitant steps taken to introduce training in India.[59] It was now for the military authorities in India and England to decide whether the growing pressure from within the army for guidance in the tactics of 'savage' warfare on the North-West Frontier should lead to a change in the existing system of Drill Books and training used by the Indian Army.

The professional debate conducted in the pages of the J.U.S.I.I. and military periodicals in England clearly reflected the perceived importance attached to the provision of appropriate training for hill warfare. As a direct result of recent experience training in the principles and minor tactics of frontier warfare were studied for the first time by the large numbers of regular troops temporarily stationed in a state of readiness at Peshawar, Nowshera and Rawalpindi pending a settlement with the Afridis.[60] Those British and Indian regiments stationed in the Khyber Pass during the spring of 1898 were given instruction in frontier warfare and rapidly increased in efficiency during training enlivened by occasional sniping.[61] A training syllabus was issued by the Commander-in-Chief in India in 1898, which laid down a progressive and continuous system of instruction, from company to battalion, for those troops stationed in the hills. It suggested that each day's training should be carefully prepared for companies by their commanders, with the use of a few men as a 'skeleton enemy' and that mountain guns should train

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[58] Henderson, op cit, p.18
[59] Maj. C.E. Callwell, Small Wars: Their Principles and Practice (London: 1899), pp.346-7
[60] 'Life on the Punjab frontier', Navy & Army Illustrated, 7, (1898), p.45
[61] Maj. A. Keene,'The British Soldier in India', J.U.S.I.I., 27, 132, (1898), pp.406-7

in co-operation with the infantry when available. The chief objects of company training were to provide elementary knowledge of the nature of hill warfare; to ground imperial troops in the first principles of the different forms of military operations in tribal territory; to make them physically fit and accustom them gradually to working in hilly terrain, working up to carrying the heavy weight of full field service equipment. Finally scouts were to be selected to provide a cadre of highly trained skirmishers and marksmen to cover the operations of each company. The General Officers Commanding districts were directed to supervise the training of battalions and smaller units under training. An 'Indian Army Order on Instruction in Hill Warfare' was also circulated, recommending four of the newly published unofficial books, pamphlets and lectures about 'savage' warfare on the frontier to act as guides for training purposes to the principles and minor tactics of frontier warfare.[62] Both the syllabus and guidelines, combining both theory and practice of hill warfare, were warmly welcomed within the Indian Army. Such training was in addition, however, to the tactics of conventional European warfare which remained the main topic of study for the Army in India at the turn of the century.

The conduct of colonial warfare was also studied at stations elsewhere in India and during several large exercises involving all three arms of services. General Penn Symons, former commander of the 1st Division in the T.E.F., exercised the troops at Umballa during 1898 in a combination of European, bush, forest and mountain warfare.[63] Additionally, a number of British and Indian regiments were given training at hill stations for the first time in the elementary principles of frontier warfare.[64] During the cold season of 1898 large training grants were made to stations such as Quetta and in the northern Punjab with mountainous terrain suitable for realistic training in the immediate vicinity.[65] A 'Camp of Exercise in Hill Manoeuvres' attended by the Lieutenant General Commanding the forces in Bengal took place in the hills at Almora and Ranikhet between 24th and 30th October 1898, representing the first serious opportunity to study hill warfare on a large scale since the need for

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[62] Hart, op cit, p.268, Peach, op cit, pp.357-8 and Maj. A.C. Yate,'Sixty Years of Frontier Warfare', J.R.U.S.I., 44, 286, (1900), pp.223-4

[63] Maj.-Gen. Sir G. Younghusband, Forty Years a Soldier, (London, 1923), p.312

[64] Atteridge, op cit, pp.533-4, and Henderson, op cit, pp.12-3

[65] Anon.,'Lessons in Hill Fighting', Navy & Army Illustrated, 7, (1899), p.415

tactical instruction had been impressed on the Army in India by the Tirah campaign.[66] A similar 'Camp of Exercise in Hill Manoeuvres' was held in the Cherat-Attock hills in the northern Punjab in March 1899, where the conduct of hill warfare was carefully examined. Troops belonging to the Rawalpindi and Peshawar Brigades practised advance guard duties, rear guard actions, piqueting and the other lessons derived from the 1897-8 campaigns under conditions approximating to active service. In an endeavour to add greater realism, they were opposed by a 'savage enemy' composed of men from the Pathan companies of the Queen's Own Corps of Guides, 24th, 25th and 27th Punjab Infantry, dressed in mufti, who harassed the regular troops exactly as if they were at home in tribal territory. Such skilled opponents made officers forcibly aware of the precautions required in hill warfare and quickly exploited those errors made by imperial troops. The manoeuvres were declared an unqualified success, but this was hardly surprising since both brigades were composed of regiments that had served during the 1897-98 operations and therefore had a practical experience of the trans-border tribes. The camp of exercise did, however, provide valuable experience and some guidelines for training, indicating that progressive training at company, battalion and brigade level was required and that each battalion should spend fifteen days training at camps in the hills during October, November and December each year before proceeding to exercises that involved brigades composed of all arms. After the camp ended Brigadier-General E.R. Elles, in command of Peshawar District, singled out the importance of special training for British, Sikh and Punjabi regiments, as they lacked an 'intuitive' knowledge of mountainous terrain which he believed that Gurkhas, Dogras and Pathan units possessed, as well as suggesting that a pamphlet on hill warfare should be translated into Urdu for use by Indian officers and men.[67] Similar manoeuvres were held for the Peshawar and Rawalpindi Brigades the following year near Nowshera and Khairabad. Sir A.P. Palmer, General Officer Commanding the Punjab Command observed:

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[66] From Q.M.G. in India, 20th Oct. 1898, P/5475 and Command Order by the Lieutenant-General Commanding the Forces in Bengal, 18th Oct. 1898, L/MIL/17/5/356

[67] Report on the Attock Manoeuvres March 1899, (Simla, 1899), p.23, Dening Mss N.A.M. 7810-106-40

The troops on the whole worked with much spirit and with considerable intelligence, they seemed to have benefited from the outing, and to be fit for anything, and to appreciate the instruction they were receiving by having the opportunity of working over ground which lends itself to acquiring a knowledge of how to deal with a Savage Enemy in the hills. Troops of the Rawalpindi and Peshawar Brigades are fortunate in being able to learn, in such a practical way, what is denied to troops serving further south, and which fits them to get more on terms with any enemy of their country whom they may be called upon to encounter in any part of the world.[68]

A 'skeleton enemy', composed of men from Pathan companies, once again added considerable realism to the exercise. Indeed the men behaved exactly as if they were opposed to a British column during a punitive campaign. Several went so far as to shower the attacking troops with boulders until they were restrained, with some difficulty, by their British officers before coming to blows with their Gurkha opponents![69]

The lessons learnt during the 1897-98 operations clearly convinced the military authorities in India that it was no longer possible to leave the regular British and Indian troops without official specialised training in hill warfare. Training carried out between 1897-98 indicated what needed to be taught to imperial battalions regarding the tactics of mountain warfare in India. However, the absence of an officially sanctioned manual laying down definite tactical procedures to ensure uniformity of training throughout the Army in India remained a desideratum. While lecturing at the R.U.S.I. in London in January 1900 on the lessons of sixty years of frontier warfare, Major A.C. Yate reiterated his earlier views regarding the provision of an official training manual:

> I should be glad to see a good official manual on mountain and other forms of savage warfare, compiled and issued to the Army. We do require some definite source from which we can learn what

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[68] Report on the Attock Manoeuvres February 1900, (Simla, 1900), p.63 L/MIL/17/5/1807

[69] Lt.-Gen. R. Baden-Powell, Indian Memories; Recollections of Soldiering, Sport, Etc., (London, 1915), pp.272-5

> hard experience has taught our predecessors. The military educational staff both in Great Britain and in India must surely feel the need for such a manual; for as everyone knows, more especially those who have to pass garrison class and tactical examinations, the subject is one that has to be studied.[70]

The widespread acceptance of the importance of an authoritative 'doctrine' and training for 'savage warfare' on the North-West Frontier, finally led to the publication of an official manual intended to provide guidance to British and Indian regulars stationed in India. A small pamphlet on mountain warfare was published by the Adjutant-General in India in 1900 for imperial infantry battalions serving in India, whose contents reflected the recent perceived lessons of the 1897-98 operations. It laid down various drills to instruct squads and companies emphasising the importance of skirmishing and the duties of infantry hill scouts. It also included and company drill covering general principles of hill skirmishing, firing uphill and piqueting for the infantry that was intended to complement the existing Drill Book. Particular attention was directed towards the conduct of retirements in contact with a tribal opponent, stressing the need for independent movement, self-reliance and initiative on the part of British and Indian troops operating in the hills.[71] This represented a unique response to the military requirements of colonial warfare, devoted to local Indian conditions. A more comprehensive and enlarged manual, entitled *Frontier Warfare 1901,* was published the following year specifically intended to provide guidance for military operations on the North-West Frontier. The preface, written by Major-General E.R. Elles, now Adjutant General in India, noted:

> It must be understood that these notes on frontier warfare are in no way intended to be in supersession of the Drill Book but are written for the assistance of commanders when operating in broken and mountainous ground and are based on the experience gained in late frontier campaigns.

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[70] Yate 1900, op cit, p.243
[71] Mountain Warfare, (Simla, 1900), Preface

The manual contained guidance regarding the tactics required against a Pathan opponent for all three arms of service, although it was a direct copy of the earlier pamphlet with regard to squad drill, skirmishing, scouting, company drill and retirements. An additional chapter dealt with the instruction of a battalion, covering reconnaissance, flanking duties, advance guards, baggage and rear guard duty. Volley firing was condemned as a waste of ammunition in hilly country, with controlled independent firing recommended as the norm. The movement of large bodies of troops and the lines of communication on the frontier formed the subject of further chapters although the manual referred primarily to operations by a single brigade in mountainous terrain. A chapter was devoted to the organisation, working and protection of the lines of communication, reflecting the transport and supply problems encountered when operating in tribal territory. The final section dealt with the principles governing the employment of mountain artillery in frontier warfare, recognising the need for greater employment of that arm, now that the tribesmen had acquired modern small arms.[72] The Drill Book and its successor *Infantry Training*, however, remained the basis of the system of training for civilised warfare in India and still included a small section on 'savage warfare,' containing information relevant to operations in open terrain which also stressed the importance of adapting to local conditions.[73] The official manuals on frontier warfare were also complemented by a further series of articles and unofficial text books produced by officers directly concerned with the training needs of the army, including one volume written by a former brigade commander in Tirah.[74]

The conduct of the military operations in Tirah had also revealed serious defects in staff planning and command. Several of the 'regrettable incidents' and heavy casualties suffered amongst the pack transport animals were directly attributable to senior officers' ignorance of the tactical, administrative and logistical conduct of frontier warfare. In particular, the judgement and ability of some of

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[72] Frontier Warfare 1901, (Calcutta, 1901)

[73] Infantry Drill (Provisional), (London, 1902)

[74] See Lt.-Col. E. Gunter, Outlines of Modern Tactics, (London, 1899), pp.259-69, Maj.-Gen. Sir R.C. Hart, Reflections on the Art of War, (London, 1901), 3rd Ed. pp.342a-3421 and Maj. L.J. Shadwell, North-West Frontier Warfare: Being an Appendix to Sherston's "Tactics as Applied to Schemes", (Calcutta, 1902)

the brigadiers and staff of the T.E.F was heavily criticised and several senior officers were accused of incompetence.[75] While those officers with prior experience of hill warfare, for example Brigadier-General A. Gaselee and Brigadier-General R. Westmacott, had generally performed well, others whose training was based on conventional military operations, experienced considerable problems.[76] In particular, Brigadier-General F.J. Kempster was singled out for negligence during the withdrawal down the Bara Valley, when the rearguard and transport of the 3rd Brigade had been left behind benighted in a village outside the main encampment.[77] To be 'Kempstered' became a widely used term of disgust and 'I'm Kempstered if I do,' an expression of dissent amongst British officers, after his military career in India was brought to an abrupt conclusion following the campaign.[78] Initial steps to provide guidance for staff officers were implemented after the operations but, apart from one small manual written by Colonel A.T. Nixon based on his personal experience gained while serving with the Tochi Field Force in 1897 and which contained copies of various Standing Orders issued during prior frontier campaigns, little information was readily available.[79] Garrison Classes, held for regimental officers in India preparing for promotion examinations, included the conduct of military operations against the Pathan tribes for the first time in 1898 compelling officers to study the subject. Annual promotion examinations included questions on hill warfare that either made direct comparisons between the specialised requirements of such campaigns and European warfare, or discussed the implications of improving tribal armament on the conduct of military operations and the requisite dispositions of a force operating in the border hills.[80]

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[75] Hamilton to Elgin, 21st Jan. 1898, Elgin Mss, Mss.Eur.F.84/16, and Anon.,'The Tirah Campaign - An Eye Witness', Fortnightly Review, 63, 375, (1898), p.393

[76] Hamilton to Elgin, 4th March 1898, Elgin Mss, Mss.Eur.F.84/16

[77] Military Department Despatch No. 30 of 1898: Manner in which Brigadier-General Kempster exercised his command during the operations in Tirah, 24th Feb. 1898, L/MIL/3/153, and Military Department Despatch No. 61 of 1898: Appeal from Colonel F.J. Kempster, late Commanding the 3rd Brigade, Tirah Expeditionary Force, against the decision of His Excellency the Commander-in-Chief India in regard to the manner in which he exercised his command in the Bara Valley, in December 1897, 28th April 1898, L/MIL/7/15892

[78] Lt.-Gen. Sir G.F. MacMunn, The Romance of the Indian Frontiers, (London, 1931), p.239

[79] Lt.-Col. J.E. Nixon, Notes for Staff Officers on Field Service, (Lahore, 1897) 2nd Ed. 1898

[80] Hart, op cit, p.269 and Shadwell 1902, op cit, p.vii and pp.93-6

The Staff College at Camberley included the administrative and operational conduct of hill warfare in its curriculum for the first time in 1899, with study based primarily on a revised edition of Callwell's *Small Wars: Their Principles and Practice*.[81] Practical instruction was given during Staff Tours held each year near Llanberis, Snowdon and Beddgelert in North Wales, to illustrate the principles of hill warfare in terrain which resembled, in some respects, that near Tirah.[82] As one Indian Army officer on the staff observed, the relevance of such Staff Tours was debatable given the wide differences in terrain between the North-West Frontier and Wales, but such training did reflect an important new awareness of the distinct military requirements of the Empire.[83] Students attending the course during the 1900s were asked to prepare detailed appreciations, plans of campaign and written guidelines for troops new to frontier warfare in order to familiarise themselves with conditions inherent in the conduct of punitive campaigns on the North-West Frontier.[84] In order to emphasise the different conditions between Staff Rides in England and military operations in tribal territory, the War Office published a detailed pamphlet in 1906 which discussed at length the details of mountain warfare in India intended primarily for officers without experience of the country.[85]

The Staff College established by Lord Kitchener in India in 1903, modelled on that at Camberley, replaced the Garrison Classes that had hitherto provided instruction to officers. While temporarily based at Deolali, a series of mountain warfare exercises and Staff Rides were held by the Senior Division in the Western Ghauts.[86] After permanent buildings were constructed at Quetta in Baluchistan, the course included questions on tactics and Staff Tours in the neighbouring hills, and concluded with an annual tour of the North-West Frontier to study the Pathan tribes and terrain at first hand.[87]

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[81] T. Miller-Maguire, Strategy and Tactics in Mountain Ranges, (London, 1904), p.5. See also T. Miller-Maguire, Analysis of Callwell's Small Wars, (London, 1902)

[82] Maj. F.G. Marsh,'The Afridi and Orakzai Country', A.R., 7, (1914), p.29

[83] Gen. Sir G. de S. Barrow, The Fire of Life, (London, 1941), p.116

[84] See 'Senior Division, 1914. Staff Tour in Wales 20th-23rd July', July 1914, and 'Memorandum for issue to units new to Frontier Warfare', 20th July 1914, Montgomery-Massingberd Mss, L.H.C.M.A. 31

[85] Notes on Staff Duties in Hill Warfare in India for the use of Officers attending Staff Rides, (London, 1906)

[86] Records of the Staff College, Quetta. (Established 1905), (Simla, 1908), p. 4 and p.10 L/MIL/17/5/2276

[87] See Capt. E. Howell,'State how far, in your opinion, the procedure found suitable during the Afridi Campaign of 1897-8 in attack, in retirement, and for

Those lectures originally written for the Staff College at Quetta formed the basis of a book written by Major W.D. Bird, a former instructor, on the principles of mountain warfare which was published on his return to England in 1909.[88]

The effectiveness of the Army in India's new system of training in hill warfare was not tested immediately as the North-West Frontier was comparatively peaceful following the 1897-98 campaigns. A combination of tribal exhaustion and Lord Curzon's endeavours to avoid punitive operations, by progressively withdrawing Indian troops from posts established in tribal territory to cantonments in India, during the early 1900s, meant comparatively few clashes occurred between hostile tribesmen and imperial troops. Various locally recruited militias, raised following the great rising, replaced the regular troops in the watch and ward of the administrative border of the newly formed North-West Frontier Province (N.W.F.P.), which now administered the trans-Indus areas and tribal territory. The mainstay of the garrison along the border remained P.F.F. regiments, although they were aided by several line regiments of the regular Indian Army.[89] However, it was evident that it would be some time before the regulars became as efficient as P.F.F. regiments. Two officers from the 5th Gurkha Rifles, for example, had to be attached to the 17th Bengal Infantry after its inexperienced officers and men encountered difficulty in adapting to the unfamiliar conditions in the Derajat.[90]

The 1901-02 Mahsud Blockade was the last military operation carried out predominantly by P.F.F. regiments. The force finally ceased to exist as an administrative unit on 31st March 1903, after a reorganisation of the system of commands on the North-West Frontier.[91] Although its units were allowed to retain the title "Frontier Force" in their regimental designations, its regiments and batteries were now made available for service throughout India and

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protection, would be required to be modified should a second invasion of Tirah become necessary, 4th Oct. 1907, Howell Mss, L.H.C.M.A. I/L/1/4-5 and Brig.-Gen. W. Braithwaite,'The Staff College, Quetta', A.R. 3, (1912), p.418

[88] Brevet.-Maj. W.D. Bird, Some Principles of Frontier Mountain Warfare, (London, 1909)

[89] Maj.-Gen. E. Collen and A.C. Yate,'Our Position on the North-West Frontier', Empire Review, 2, 10, (1901), p.388

[90] Military Department Despatch No. 24 of 1902: Ambush of 17th Bengal Infantry at Khusma Khulla by Mahsuds 3rd November 1901, 30th Jan. 1902, L/MIL/3/160 and History of the 5th Royal Gurkha Rifles, p.160

[91] Military Department Despatch No. 186 of 1902: Proposed reconstitution of the commands and staff of the military districts on the North-West Frontier, 2nd Oct. 1902, L/MIL/7/7455

overseas although by training and tradition they were still regarded as experts in frontier warfare.[92] Henceforth the provision of training manuals and specific training for hill warfare was even more essential, as the garrisons in the N.W.F.P. were filled by British and Indian regiments periodically rotated through the area as part of the normal system of regimental reliefs. New units arriving at the border cantonments had to quickly acquaint themselves with the intricacies of frontier warfare based on the instruction laid down in the training manuals and the advice of experienced officers, N.C.O.s, and soldiers already serving in their ranks or in other units. As a result the principles and minor tactics of frontier warfare were closely studied by the local garrisons and those detailed for their immediate reinforcement in the event of war. Indeed, there was a veritable 'boom' of interest in this class of warfare, as a result of which it was hoped that the skills, training and traditions of the P.F.F. would be 'passed on' to the rest of the army. Troops stationed in the border cantonments, formed into moveable columns ready to support the militia carried out a series of 'savage warfare' exercises utilising training areas along the border hitherto monopolised by P.F.F. regiments. In November 1903 the Bannu moveable column, for example, simulated its response to an attack on Kurram Garhi post by a party of well armed tribesmen.[93] Instruction in hill warfare was also carried out at regimental level throughout India.[94] During the summer of 1906, units of the 5th (Mhow) Division carried out training, for example, in both bush and hill warfare.[95] Preliminary training was possible, for example, near stations such as Rawalpindi and in the mountains surrounding the Quetta plateau. In Lahore District suitable terrain also existed nearby Bakloh and Duneira where it was possible to exercise troops in brigade strength and in parts of Umballa District hilly areas could also be employed for realistic training. Training those regiments stationed on the plains of India in frontier warfare, however, posed certain intrinsic problems that had already been foreseen during the 1890s. It was

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[92] Col. G.K. Moncrieff,'Some Punjab Frontier Recollections', Blackwood's, 176, 569, (1904),pp.597-613 and R.S. Dey, A Brief Account of the Punjab Frontier Force, (Calcutta, 1905), p.3

[93] Manoeuvres held at Bannu on 3rd November 1903, under Brig-General J.B. Woon, Commanding Bannu Tochi Force, Nov. 1903, Dening Mss, N.A.M. 7810-106-44

[94] Lt.-Gen. Sir G.F. MacMunn, Behind the Scenes in Many Wars, (London, 1930), p.82

[95] Maj.-Gen. L. Dening, Commanding Vth (Mhow) Division to Brig.-Gen. T. Capper, 14th July 1906, Dening Mss, N.A.M. 7810-106-55

often impossible to provide realistic instruction as suitable terrain did not exist nearby most cantonments, although it was possible to practise such elementary skills as the posting and withdrawal of piquets on the parade ground. British regiments were in a more favourable position, as they moved into hill stations annually to avoid the worst effects of the summer heat. The wide differences in terrain and vegetation between many hill stations, however, such as those on the Himalayan frontier and those in tribal territory complicated instruction, but did not prevent units learning useful skills that could be utilised in mountain warfare. Despite such drawbacks the system of reliefs meant that units, otherwise denied frontier service, could now become familiarised with border conditions in the most likely theatre of operations for the Army in India. However, the system also meant that troops were seldom in one location long enough to acquire a detailed knowledge of either the local terrain or the people and were seldom able to achieve as high a standard of training and efficiency in mountain warfare as P.F.F. regiments had during the nineteenth century. The service press supplemented the official manuals and published a series of articles relating to frontier warfare, as peace time training revealed practical changes with regard to scouting, field craft, marksmanship and physical fitness. Additionally, a succession of articles relating to the conduct of hill warfare appeared in the pages of professional military journals in India and England.[96]

The military authority's in India decision to prepare and issue manuals and implement training in frontier warfare to complement that laid down for European warfare had implications for the development of training for other classes of 'savage warfare' also at variance with that laid down in the drill book. A manual on jungle warfare was written by Captain A.W. Taylor, specifically for Indian Army officers attached to Burma Military Police battalions, which contained various extracts and references from the pamphlet on mountain warfare prepared by the Adjutant General in India.[97] A series of articles and

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[96] See Capt. H. Rowan-Robinson,'The Chitral Campaign', J.R.U.S.I., 50, 345, (1906), pp.1373-86, Capt. H. Rowan-Robinson,'A Short Account of the Tirah Campaign', Proc. R.A.I., 32, (1906-7), pp.513-69, and Maj. N. Woodyatt,'Notes on Hill Training', J.U.S.I.I., 36, 167, (1907), pp.155-75

[97] Capt. A.W. Taylor, Jungle Warfare: the conduct of small expeditions in the jungles and hilly tracts of Burma, and a system of drill and musketry instruction connected therewith, for the use of officers of the Burma Military Police, (Rangoon, 1902)

books also appeared, written by experienced British officers from both the Indian and British armies, which emphasised the importance of suitable training for officers seconded to the Foreign or Colonial Offices, as well as for the Indian Army regiments deployed in Africa. These were intended to supplement the existing official manuals based on conventional operations and represented a continued reaction against the Eurocentric instruction that dominated the training of the British Army.[98] *Frontier Warfare 1901* was complemented by a small appendix published in 1903 entitled *Bush Fighting. (An Appendix to "Frontier Warfare")* intended to provide guidance for Indian regiments deployed on the North-Eastern frontier of India and the increasing number of officers and men from Indian regiments serving in east and west Africa. It included a 'Syllabus of Instruction in Bush Tactics' that contained information on skirmishing and other skills required by imperial troops.[99] The two manuals were amalgamated in 1906 to produce a final authoritative manual governing the conduct of frontier warfare around the peripheries of India and for operations elsewhere in the British Empire. Sir Beauchamp Duff, the Chief of Staff, emphasised in the preface of *Frontier Warfare and Bush Fighting*: 'It must be understood that these notes… are in no way in supersession of the Training Manuals but are written for the assistance of commanders when operating in broken and mountainous ground and in Bush Countries and are based on the experience gained in late various campaigns.' Although the text and contents were identical in most respects to those of the earlier edition, it referred throughout the text to the current training manuals - Infantry Training 1905, Combined Training 1905 and Field Service Regulations - produced to direct training in conventional military operations.[100]

The British Army serving elsewhere in the British Empire remained without a source of official instruction and training in other forms of 'savage warfare'. A small section in Infantry Drill represented the sole source of information available to units preparing for imperial service, with its continued emphasis on the use of close-order formations long abandoned for European warfare.

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[98] Maj. C.B. Morgan, Hints on Bush Fighting, (London, 1899) and Lt.-Col. A.F. Montanaro, Hints for a Bush Campaign, (London, 1901)
[99] Bush Fighting. (An Appendix to "Frontier Warfare"), (Calcutta, 1903)
[100] Frontier Warfare and Bush Fighting, (Calcutta, 1906)

Indeed, the square and echelon formations it recommended for battalions and brigades employed in 'savage warfare' now required special training as the emphasis on close-order drill had declined after the Second Boer War.[101] A succession of books and articles, however, appeared in the service press in England addressing for the first time in some detail the requirements of desert and bush warfare following the official acceptance of appropriate training in India.[102] In a detailed study of warfare in West Africa, after noting that little information was available in official text books, Colonel C.B. Wallis asked a fundamental question regarding the British Army and colonial warfare: 'Is our training in the art of war efficient for our needs in every part of the Empire? Is it sufficiently practical and elastic to be able to cope with the Boer on the Veldt, the Afridi on the North-West Frontier, the Dervish in the Soudan, the savage in the West African forest. and our numerous other possible foes in different parts of the civilised and uncivilised world?'[103] The continued reliance on localised military forces in most parts of the Empire, such as the West African Frontier Force of the King's African Rifles, solved the problem in many respects as these units contained outbreaks of resistance to imperial rule, obviating the need for the deployment of regulars. Lieutenant L.F. Renny could still complain with some justification that savage warfare, in which a large number of British officers and men were constantly engaged, was neglected in the official drill books.[104] Although it was never officially adopted as a text-book, despite a preface written by the Chief of the Imperial General Staff, the third revised edition of *Small Wars: Their Principles and Practice* which was published in 1906, provided the most authoritative, popular and widely available source of information for British officers preparing for imperial service up to the end of the Second World War.[105]

The punitive expedition mounted against the Zakka Khel Afridis in February 1908, after a succession of large and well organised raids had been perpetrated in Peshawar District, provided the Army in India with an opportunity to assess the effectiveness of its troops

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101 Infantry Drill (Provisional), (London, 1902), pp.234-5

102 See K. Dunnoley, Drill Made Easy: Savage Warfare, (London, 1900) and E. Bartlett, Battalion and Brigade Drill for Savage Warfare, (London, 1904)

103 Col. C.B. Wallis, West African Warfare, (London, 1905), pp.63-4

104 Lt. L.F. Renny, 'Savage Warfare', J.R.U.S.I., 50, 346, (1906), p.531

105 Col. C.E. Callwell, Small Wars: Their Principles and Practice, (London, 1906)

in frontier warfare. The operation, conducted under the command of Major-General Sir James Willcocks, represented a dramatic change from prior military operations during the 1890s and gave the Indian Army an opportunity to apply the principles and minor tactics of frontier warfare which had been learnt and practised since 1898. The Bazar Valley Field Force, operating with a minimal amount of equipment and mule transport was mobilised in thirty-six hours and achieved complete surprise over the Zakka Khel, who submitted after punitive operations were conducted in the Bazar Valley between 17th-24th February 1908. After having sustained only minor casualties during the fighting, three killed and 37 wounded, which Sir James Willcocks directly attributed to the high state of efficiency and training which Indian troops had acquired, the column withdrew back across the administrative border on 29th February 1908. The Zakka Khel had suffered casualties in excess of those lost in the Tirah Expedition despite being heavily armed with Martini-Henry rifles purchased in Afghanistan. Indeed, their maliks admitted that every family in the Bazar Valley had suffered losses from amongst its fighting men.[106] It was clear that improvements in light infantry and musketry training following the Tirah campaign and the Boer War had dramatically increased the effectiveness of the Indian troops. During negotiations preceding the peace settlement, the Zakka Khel openly acknowledged the improved fighting ability of the Indian Army. Lieutenant-Colonel Roos-Keppel noted: 'The Afridis, who are no mean judges of hill fighting, express themselves amazed at the handling and conduct of the troops as unlike anything they have seen or heard of, and the fact that they have obtained no loot in mules, rifles, stores, or ammunition, on which they confidently counted to compensate for their own losses, has given them a strong distaste for expeditions conducted on these novel lines.'[107] The Viceroy, Lord Minto, concurred:

> From a military point of view the most satisfactory features of the expedition were the ease and rapidity with which it was sent off without any dislocation of the separate commands, the

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[106] G.O.C. Bazar Valley Force to Foreign Secretary, 21st Feb. and 25th Feb. 1908, L/P&S/10/46

[107] Lt.-Col. G.O. Roos-Keppel, 'Political Report of the Bazar Valley Expedition, 4th March 1908, L/P&S/10/46

excellence of the transport and supply arrangements, the signalling communications, and above all the unexampled efficiency of the troops themselves in their knowledge of hill fighting. They proved as good or even better than the Zakkas themselves among their own hills. It speaks volumes for the pains bestowed on their training. In 1897 the superiority of the tribes over us in the hills was very marked and we suffered heavily, whilst I believe the Zakka loss on the present occasion exceeds the whole tribal loss in the Tirah campaign and our own loss has been extremely small.[108]

Two months later, similar operations were mounted against the Mohmands and after another short and sharp campaign they submitted after suffering heavy casualties at the hands of Indian troops. The success of both of what became known as 'Willcocks' Week End Wars' was a direct tribute to the improved training in hill warfare born of the frontier rising and vastly improved standards of musketry instruction in the Indian Army.[109] Both campaigns confirmed the importance of training for frontier warfare, provided valuable experience for British and Indian regiments and represented an important test of changes in the organisation, administration and training of the Indian Army during the 1900s. They also confirmed that the tribesmen had now acquired large quantities of Martini-Henry and .303 rifles, which they used with effect during night attacks and in sniping, although on several occasions swordsmen still reverted to ghazi tactics.[110]

The Zakka Khel and Mohmand punitive expeditions represented the last major operations mounted by imperial troops against the trans-border tribes before the outbreak of the First World War. Nevertheless the insistent duties of the watch and ward of the border ensured the garrisons in the N.W.F.P. maintained a high level of military preparedness and trained primarily for frontier warfare. After the 1908 operations, further information regarding hill warfare

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[108] Minto to Morley, 23rd March 1908, Morley Mss, Mss.Eur.D.573/14

[109] C.W. Miles, The Zakka Khel and Mohmand Expedition, (Rawalpindi, 1909), p.13, and Maj. G.F. MacMunn,'The Old Frontier Story', Fortnightly Review, 27, 158, (1909), p.251

[110] Gen. Sir J. Willcocks, The Romance of Soldiering and Sport, (London, 1925), pp.234-5, and Lt. A.H. Burn,'The Mohmand Expedition. Some Reminiscences', U.S.M., 38, (1909), pp.317-8

was 'passed on' to units serving along the border. A report on training carried out by Bannu Brigade between 10-15th February 1908, for example, simulating an attack on a frontier village followed by a withdrawal in contact with hostile tribesmen, the construction of a perimeter camp and its defence from a night attack, convoy escort duty and the duties involved in intercepting parties of tribal raiders, was circulated by Northern Command to other units to guide instruction.[111] The Russo-Japanese War, the declining incidence of punitive expeditions and the reorientation of British policy towards Europe, however, led to a progressive decline of professional interest in frontier warfare elsewhere in India following the boom of the early 1900s. Apart from the independent frontier brigades in the N.W.F.P., which carried out training predicated on operations against a 'savage' opponent, the mainstream of professional attention re-focused on training against a 'civilised' opponent.[112] Although the service press published a series of articles on the conduct of frontier warfare, suggesting further refinements in accepted doctrine or examining the role of the respective arms of service, the subject had now lost its prior urgency and appeal to many regimental officers.[113] The unquestioning acceptance of the guidelines contained in the specialised frontier warfare manuals by some regiments as the basis of all training caused consternation and alarm amongst the General Staff in India. Several units employed perimeter camps during manoeuvres for conventional warfare, leading to an important change in the approach to training for hill warfare. In accordance with a decision made at the Imperial Defence Conference in 1909, the specialist frontier warfare manuals were cancelled in an endeavour to standardise training regulations and the organisation, administration and training of imperial troops throughout the Empire. Training in India was brought into line with the rest of the Empire in 1911 with the adoption of Field Service Regulations (F.S.R.), Musketry Regulations, Training and Manoeuvre Regulations, the training manuals

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[111] Report on Brigade Training, Bannu Brigade, under the orders of Major-General C.G.M. Fasken, Commanding Bannu Brigade. February 1908, (Allahabad, 1908)

[112] Birdwood, op cit, pp.206-7. See also Field Service Standing Orders for the Kohat Brigade by Brigadier-General W.R. Birdwood Commanding Kohat Brigade, (Roorkee, 1911)

[113] See Capt. G.R. Wheatley,'Safety at Night in Frontier Warfare', J.U.S.I.I., 38, 174, (1909), pp.97-102, Bvt.-Col. C.B. Unwin,'A Short Account of the Cavalry Work during the Operations of the Mohmand Field Force', C.J., 4, (1909), pp.88-95 and Capt. H.H. Knox,'Are Night Operations Suitable for Operations Against North-West Frontier Tribes', J.U.S.I.I., 39, 178, (1910), pp.136-49.

of the various arms and the Field Service Pocket Book as the basis of its organisation, administration and training.[114] The inclusion of all official instruction on frontier warfare in F.S.R. met initial opposition in India, as many officers did not understand the underlying reasons behind the proposal and the draft section on mountain warfare did not provide sufficiently comprehensive guidance. A Committee headed by the Director of Military Training concluded that, while dividing the subject of instruction in frontier warfare between F.S.R. and specialist training manuals was sound in theory, it did not function in practice and had caused considerable confusion.[115] During a lecture at the Staff College at Quetta on 14th October 1912, General Sir O'Moore Creagh, the Commander-in-Chief in India, observed:

> Up to the time of the Tirah campaign "mountain warfare" was looked on as a special prerogative of the Frontier Force, and was practically entirely neglected by the Army at large. After that campaign there was a violent swing of the pendulum in the opposite direction, and tendency rose to stereotype warfare into two distinct types, the character of the ground and of the enemy were often ignored, and the "perimeter" camp especially became almost a fetish, so that at manoeuvres it was common to see troops crowded into such camps even when opposed by an enemy provided with artillery. The result was no doubt greatly due to the fact that the rules for frontier warfare were contained in a separate manual, for this manual was unfortunately accepted by many officers as containing all that was required. It was overlooked that it did not deal with *principles* at all, but only with such *modifications* of the principles as were necessitated by the topographical conditions and the character of the enemy on the frontier; and that the rules given were merely complementary to those contained in the ordinary training manuals.[116]

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[114] 'The General Staff in India', A.R., 2, (1912), p.22
[115] Gen. Sir O. Creagh,'The Army in India and the New Field Service Regulations', A.R., 4, (1913), pp.31-9
[116] Ibid, pp.34-5

A revised edition of F.S.R. published in 1912 contained amendments especially for the Indian Army and this became the primary source of tactical guidance regarding the conduct of mountain warfare. A new chapter, entitled *Warfare in Uncivilized Countries*, began by noting that: 'In campaigns against savages the armament, tactics, and characteristics of the enemy, and the nature of the theatre of operations demand that the principles of regular warfare be somewhat modified; the modifications in this chapter are such as experience has shown to be necessary.' It contained sections devoted to both bush and mountain warfare, but the latter subject was restricted to six paragraphs covering protection on the march, protection when at rest, camps and bivouacs, general information and a section on piquets. Although it was realised by the General Staff that such brief guidelines might create training problems, it was accepted that it was impossible to magnify the special sections for India in a general manual intended for imperial troops throughout the Empire.[117]

The conduct of conventional European warfare was the main preoccupation of the Army in India during training, but it was realised that it was still incumbent on British officers to prepare for more specialised operations on the North-West Frontier despite the comparatively peaceful state of the area.[118] An indication of the degree to which training now concentrated on conventional military operations was evident by 1911 when one officer observed: 'Situated as we are in India it is to be hoped that the pendulum will not swing too much one way, leading us to neglect continual practise of the plans and tactics mainly suitable for an encounter with unorganized tribesmen.'[119] The 1911-12 Memorandum on Army Training cautioned the Bannu and Derajat Brigades that, although experience gained during local training and the watch and ward of the border was valuable, it should not obscure the fact that their troops might be called upon to fight in any part of the Empire. Northern Command was also praised for carrying out a frontier tour during which the principles of civilised warfare were addressed and it concluded with the warning: 'It is true that the principles of warfare are always the same, but

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[117] Field Service Regulations, Part I Operations 1909 (Reprinted with Amendments 1912), (London, 1912), pp.191-212

[118] Maj. E.J. Wood,'Specialisation in Training', J.U.S.I.I., 40, 183, (1911), pp.165-69

[119] By a C.O.,'Reflections on the Training of the Infantry Officer', J.U.S.I.I., 40, 183, (1911), p.147

there is a danger of the main principles being obscured in the details of guerilla warfare.'[120] Despite these changing priorities, several books were published which a further important means of expanding the information contained in F.S.R. on mountain warfare in India. A detailed didactic study of the Tirah Campaign written by Colonel Charles Callwell appeared in 1911 in the 'Campaigns and their Lessons' series, chosen as an example of a campaign conducted by regular troops against irregulars, in which tactics and training required for mountain warfare in India were described at length.[121] A one volume 'student's history' of frontier warfare written by Captain H.L. Nevill, appeared the following year, intended to familiarise officers with the North-West Frontier, to illustrate the principles of F.S.R. and to provide a detailed account of the gradual changes of arms and tactics used by both the tribesmen and the Indian Army, which provided a particularly useful source of knowledge for interested officers.[122] It was complemented by a general survey of operations and campaigns written by Colonel H.C. Wylly in 1912 to provide information about the tribes, the borderland and prior punitive campaigns which had been conspicuous by its absence in 1897.[123] The decreasing professional interest in frontier warfare was the subject of a lecture by Colonel W.E. Venour, a highly experienced Frontier Force officer, at the U.S.I.I. in 1913. Venour called for a revitalisation of interest in such fighting and stressed its wider importance for both Indian and British troops.

> Since 1908 there have been no expeditions on the Pathan border and it seems that interest in this particular form of training has somewhat waned throughout the army as a whole. In the future, as in the past, this is the most likely form of fighting in which Indian troops may have to take part, and as long as they serve in India the same thing applies to British troops; and though they may have to train in Europe or any part of our Empire, still a knowledge of frontier warfare is a

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120 'Memorandum on Army Training in India, 1911-12', A.R., 4, (1913), pp.96-7
121 Callwell 1911, op cit
122 Nevill, op cit
123 Wylly, op cit

> useful fighting asset to any unit under any conditions, teaching as it does initiative and self reliance.[124]

Venour questioned the wisdom of including instruction regarding frontier warfare in a single manual that formed the basis of all infantry training throughout the Empire. The six paragraphs included in the 1912 edition of the F.S.R. were of necessity so condensed that a considerable diversity in the methods of applying the principles existed amongst units and between different brigades with regard to piquets and perimeter camps. As absolute uniformity in minor tactics was required in frontier warfare, he observed that these variations made imperial troops vulnerable to tribal attack. As a solution to the problem Venour suggested the addition of an Indian appendix to F.S.R. and the creation of a training school to provide systematic training in the 'peculiarly Indian subject' of frontier warfare modelled on similar lines as the Mounted Infantry schools held at Umballa and Poona.[125] In the ensuing discussion the Chief of Staff, Lieutenant-General Sir P. Lake, noted the dangers inherent in too much specialisation in F.S.R., but it was clear that the majority of the audience supported the idea of a training school for frontier warfare.[126]

Despite such reservations the Indian Army contained a large proportion of officers and men who possessed a sound working knowledge of the principles and minor tactics required for operations on the North-West Frontier by the outbreak of the First World War. The former P.F.F. regiments provided a nucleus of highly trained soldiers with experience, training and a tradition of expertise in mountain warfare against the trans-border Pathan tribes. A large number of regular regiments had acquired practical experience, familiarised themselves with local conditions and built up a cadre of officers, N.C.O.s and men accustomed to the requirements of frontier warfare for the first time by a system of periodic reliefs in the border garrisons. The steadily increasing fighting strength, armament and military effectiveness of the trans-border Pathan tribes, however, remained a serious source of concern. It was estimated by

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[124] Col. W.E. Venour,'Training for Frontier Warfare', J.U.S.I.I., 42, 193, (1913), p.381
[125] Ibid, pp.382-9
[126] Sir. P. Lake, comment on Ibid p.389-90

the General Staff in India in 1911 that more than six divisions along with additional infantry, cavalry and pioneers would be required to deal with a general rising similar to that in 1897-98 or to secure the lines of communication in the event of war with Afghanistan.[127] It was increasingly apparent that frontier warfare would become more costly and protracted in the future, moreover, as lashkars assimilated military training through service in the Indian Army and militias and acquired increasing quantities of modern breech-loading rifles and ammunition.[128] Despite the realisation that the military effectiveness of Afridi lashkars had been significantly enhanced by ex-servicemen in their ranks, however, large numbers of trans-border Pathans were still enlisted into the military. On 1st January 1908 a total of 10,600 trans-border Pathans were serving in the ranks of the Indian Army and the various irregular forces raised in the N.W.F.P. since 1899.[129] Indeed, endeavours were made to widen enlistment to include tribes other than the Afridis when the Wazirs and Mahsuds were recruited into the 30th Baluch Infantry for the first time.[130] Perhaps of greater significance was the growing availability of modern 'arms of precision' in tribal territory. During the early 1900s a traffic in arms from the Persian Gulf via Afghanistan flooded the Pathan borderland with European rifles far superior to earlier locally manufactured weapons. The scale of the arms trade threatened the political and military stability of the North-West Frontier by 1909 and posed a serious threat to peace, after large consignments of high quality rifles far superior to the weapons which equipped the irregular forces responsible for the 'watch and ward' of the administrative border began to arrive in tribal territory.[131] As a direct result the militias and Border Military Police had to be hurriedly rearmed to keep pace with raiding gangs, and in 1910 the

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[127] Proceedings of the Army in India Committee, 1912. Vol. II Minutes of Evidence, (Simla, 1913), p.163 L/MIL/17/5/1751/3 and Proceedings of the Army in India Committee, 1912. Vol. VI Appendices, (Simla, 1913), App. VIII L/MIL/17/5/1751/7

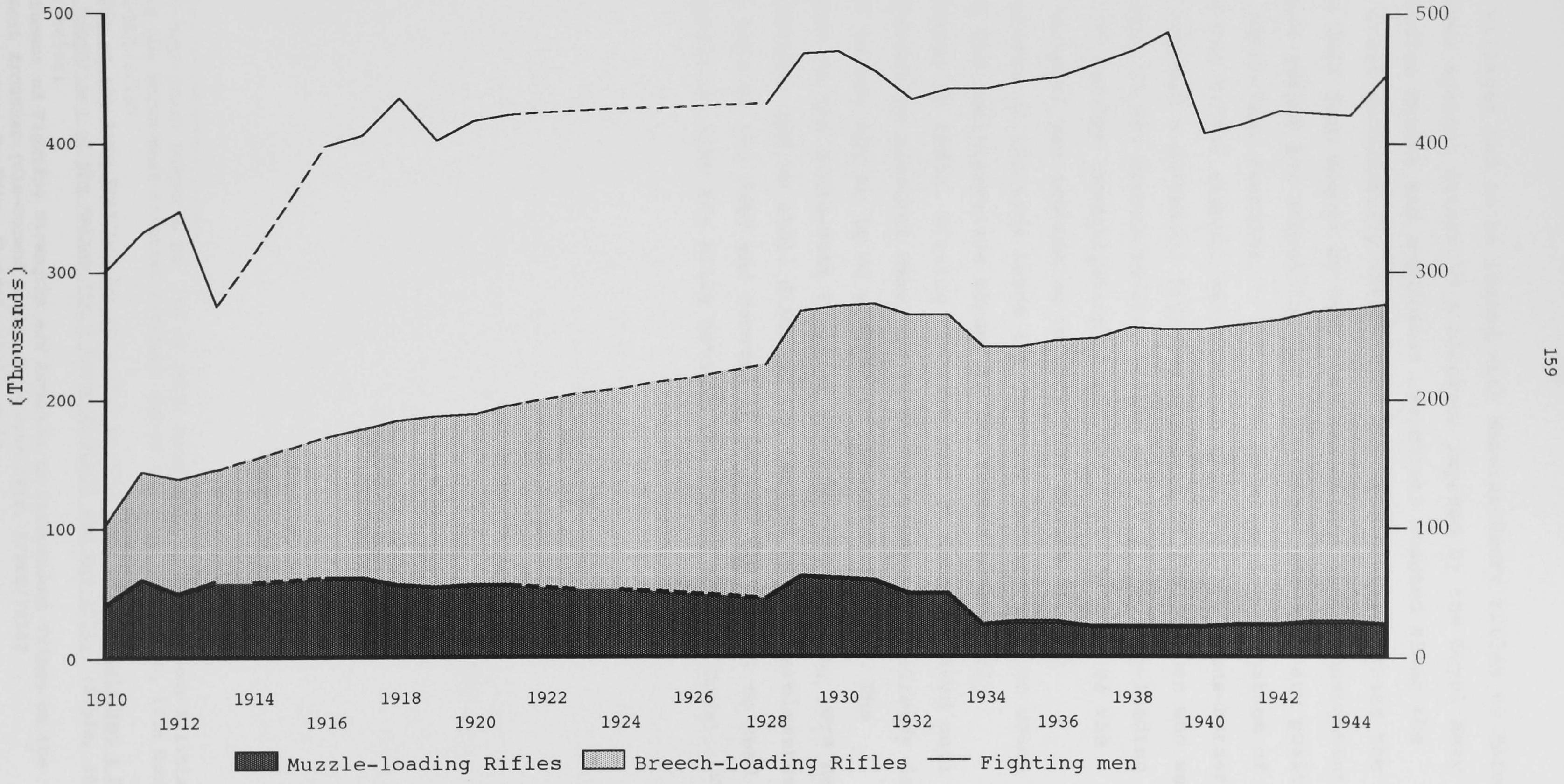
[128] Notes on the Indian Frontiers, (Simla, 1912), pp.43-4 L/MIL/17/13/9 and Nevill, op cit, pp.365-81

[129] Annual Return showing the Class Composition, Countries and Establishments of the Indian Army, Imperial Service Troops, Military Police and Militia on 1st January 1908, L/MIL/7/17084

[130] Military Department Despatch No. 97 of 1903: General, 11th June 1903, L/MIL/7/7118 and Army Department Despatch No. 113 of 1910, Recruitment of Mahsuds for the Indian Army and reconstitution of the Baluch and Baluchistan Infantry Regiments, 22nd Sept. 1910, L/MIL/7/7158

[131] Foreign Department Despatch No. 135 of 1909 (External): Proposed measures for the suppression of the arms traffic in the Persian Gulf, 2nd Sept. 1909, L/P&S/10/216 and Moreman, op cit, pp.204-8

Figure 5. Fighting Strength and Armament of Trans-Border Pathan Tribes (Cis-Durand Line), 1910 - 1945



Note: No information available for 1914-15 or 1922-27

border villages had to be issued with Martini-Henry rifles to defend themselves against attack.[132] A blockade imposed by the Royal Navy and Royal Indian Marine and amphibious operations mounted along the Mekran Coast successfully interdicted the arms traffic across the Persian Gulf from Muscat by 1911, but not before large consignments of modern rifles and ammunition had transformed the military position on the North-West Frontier.[133] The first detailed investigation of the size of the tribal arsenal estimated in 1910 that the trans-border tribes now had a potential fighting strength of 301,596 men who were armed with 63,564 breech-loading rifles and 40,270 muzzle-loading rifles.[134] Further investigations confirmed that the size of the tribal arsenal was continuing to grow (See Figure 5). The implications of the arms trade for frontier warfare and the watch and ward of the administrative border in the future were widely appreciated in India. Writing the same year F. Lovat pointed out: 'Our preventive measures came too late. The mischief is already done, and all we can now do is to prevent it spreading farther. The tribesmen on the North-West Frontier are now armed as they were never armed before, and we shall discover the results of our carelessness in the tale of the dead and wounded if we ever again have to send a big expedition into the hills between the Khyber and the Gomal.'[135]

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[132] Army Department Despatch No. 150 of 1909: Rearmament of the various Militia corps in the North-West Frontier Province and of the Zhob Levy Corps, 16th Dec. 1909, L/MIL/3/195

[133] Report on the Arms Traffic. 1st July 1911 to 30th June 1913. (Including a Note on the Operations of the Makran Field Force in April and May 1911), (Simla, 1913) L/MIL/7/168641

[134] Statement of Fighting Strengths and Armament of Independent Tribes on the North-West frontier (Cis-Durand Line), 27th June 1910, L/P&S/7/242

[135] F. Lovat, Arms Traffic, (London, 1911), p.43

Chapter Four
The Lessons of Waziristan
August 1914 - October 1925

Following the outbreak of the First World War the conduct of conventional military operations became the preoccupation of the Indian Army. However, whilst the mainstream of professional military thought was directed towards the battlefields of Flanders, the Middle East, Mesopotamia and East Africa, the North-West Frontier remained an insistent source of concern to the imperial authorities in India. Afghanistan and the independent tribes posed a threat to the security of the N.W.F.P. throughout the war.[1] Three infantry divisions and a cavalry brigade, were mobilised and stationed in the settled areas for the duration of the war, in addition to the three existing frontier brigades and militia. The quality of these troops steadily declined as the war progressed, however, as highly trained and experienced long-service professional officers and men were sent overseas to France, Egypt and East Africa. Those units that remained were steadily 'milked' of officers, N.C.O.s and men, to act as instructors or replace casualties, and were soon composed primarily of reservists and raw recruits. During 1915, the remaining regulars in the Field Army were replaced by newly-raised under-officered and poorly-equipped Indian regiments, the Nepalese Contingent and Imperial Service Troops, while newly arrived British Territorial Army (T.A.) regiments underwent intensive training.[2]

The military effectiveness of the border garrisons directly concerned the General Staff in India, when unrest spread throughout tribal territory. In January and March 1915 militia and troops repelled two major incursions by Afghan tribesmen across the Durand line into Waziristan.[3] 1st (Peshawar) Division inflicted heavy casualties on a lashkar near Hafiz Kor in April and, along with 2nd (Rawalpindi) Division and the Frontier Constabulary, contained

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[1] L. Baha. N.-W.F.P. Administration under British Rule 1901-1919, (Islamabad, 1978), p.81

[2] Despatch by His Excellency General Sir C.C. Monro, Commander-in-Chief in India, on the part played by India, including the Indian States, in the prosecution of the war, 9th April 1919, L/MIL/7/18779 and Gen. E.G. Barrow, 'Minute on the Military Situation in India consequent on the War, 6th June 1915, Barrow Mss, Mss.Eur.E.420/8

[3] Report by Major-General Hugh O'Donnell on an attack on Spina Khaisora on the 7th January 1915, (Simla, 1915), L/MIL/17/13/24 and Report on the operations in the vicinity of Miranshah, 25th and 26th March 1915, (Simla, 1915) L/MIL/17/13/25

further attacks at Shabkadr and Subhwan Khwar in August, September and October 1915.[4] The declining strength, training and efficiency of the troops in Northern Command was, however, partially compensated for when a squadron of BE2C aircraft was stationed at Peshawar in December.[5] Armoured cars and motor transport companies were also deployed in the N.W.F.P. for the first time in 1915.[6] Throughout the war a mixed assortment of Rolls-Royce, Minerva, Daimler, Itala and Overland armoured cars patrolled roads, escorted convoys of motor vehicles and maintained communications with isolated posts along the border.[7] The small proportion of experienced officers and N.C.O.s capable of supervising training in Northern Command, the deployment of partially trained T.A. battalions and the likelihood of further disturbances in tribal territory, however, made appropriate instruction in mountain warfare of particular importance. It was soon apparent that an additional official source of tactical information would be required to supplement the general principles and six condensed paragraphs on mountain warfare laid down in F.S.R., as the relative novices now filling the border garrisons lacked both basic military knowledge and experience. A Mountain Warfare School was opened on 21st May 1916 specifically to train T.A. officers and N.C.O.s, who would in turn act as instructors at their own units in the principles and minor tactics of hill warfare. Four highly successful week-long courses were held at Abbottabad, Dharmsala, Lansdowne and Wellington, where a total of 27 officers and 108 N.C.O.s were introduced to the practicalities of mountain warfare against a 'savage' opponent.[8] Training for more senior officers in the staff duties associated with mountain warfare also received attention in the syllabus of the Staff School established at Quetta.[9]

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[4] Report by Major-General Sir F. Campbell on the Action near Hafiz Kor, 18th April 1915, (Simla, 1916) L/P&S/10/372 and Summary of the Administration of Lord Hardinge of Penshurst November 1910 - March 1916, (Dehli, 1916), p.92 V/27/230/72

[5] Squadron-Leader A.J. Young, 'Royal Air Force North-West Frontier, India, 1915-39', J.R.U.S.I., 127, 1, (1982), p.59 and Col. Montagu, 'Some Notes on the use of Aeroplanes on the N.W. Frontier, 25th May 1915, Montagu Mss, L.H.C.M.A. VII/3

[6] Army Department Despatch No. 38 of 1915: Provision of armoured motor cars at certain centres in India, 15th April 1915, L/MIL/7/12934 and Army Department Despatch No. 67 of 1915: Provision of Mechanical Transport for employment on the North West Frontier, 2nd July 1915, L/MIL/7/6629

[7] Col. Lord Montagu, Report on Mechanical Transport and Armoured Cars in India, (Delhi, 1917), pp.12-13 L/MIL/17/5/1868 See Notes on Armoured Cars, (Simla, 1915) Montagu Mss L.H.C.M.A. VII/1

[8] Report on the Principal Measures taken in India during the War to Maintain Training at the Standard required in Modern War, (Calcutta, 1919), p.2 and App. A L/MIL/7/5466 (Hereafter Report on Principal Measures)

[9] Ibid, App. B

The 1st (Peshawar) and 2nd (Rawalpindi) Divisions conducted operations along the Mohmand border in 1916, employing aircraft and armoured cars for the first time, exposing differences in the existing system of training and tactical procedures amongst their units.[10] At a conference held for senior officers in Dehli between 22nd-24th February 1917, the G.O.C. 2nd (Rawalpindi) Division complained that there was a serious lack of uniformity in the application of the principles laid down for the conduct of mountain warfare in F.S.R., representing a source of confusion and danger in the field. Major-General W.E. Bunbury argued that it was necessary to lay down more definite rules for such operations: 'Every teacher of mountain warfare and every writer on the subject appears to have his own ideas, not so much to principles but as to how they should be applied, and the result is that one finds different teaching on certain points in every brigade and even in the battalions of a brigade.' Opinion differed between units and formations regarding, for example, the correct way of posting and withdrawing piquets and the relative merits of piqueting slips or bayonet sentries. Although these appeared 'trifling' differences in procedure, he warned that, during prior campaigns, they had resulted in serious casualties. Despite his criticisms, Bunbury was a firm advocate of F.S.R., although he urged that definite rules for the application of its principles should be laid down. The ensuing discussion reflected the continued interest in the conduct of mountain warfare within the Indian Army. Major-General Sir F. Campbell, G.O.C. 1st (Peshawar) Division, warned that it was dangerous to lay down precise details or specify tactics to be employed on particular occasions. Other senior officers were opposed to any addition to the manual, stressing the importance of relying solely on general principles universally applicable to all forms of warfare. Following a discussion of the minor tactics employed in various formations on the frontier, the Director of Staff Duties and Training observed that the Commander-in-Chief was, in principle, strongly opposed to the publication of a special manual or any additions to F.S.R.. Brigadier-General H. Isacke pointed out all that was required was to ensure that all units

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[10] Despatch by His Excellency General Sir Charles Carmichael Monro, C-in-C India, on the minor military operations undertaken from March 1916 to March 1917 on the North-West Frontier of India, and elsewhere in the Indian Empire, including Aden, also in South and South-East Persia, (Simla, 1917), pp.3-4 L/MIL/3/1116

and formations based their instruction on sound principles and observed, that now A.H.Q. had decided to open a mountain warfare school at Abbottabad during the summer, more light would be thrown on the points that had been raised.[11] The G.O.C. Northern Command, Lieutenant-General Sir A. Barrett, an officer of extensive frontier experience, closed the discussion:

> With regard to this question, I think there is no doubt that mountain warfare is a science. I have always regarded it as a thing very like a game of chess which wants a great deal of skill to avoid mistakes, but at the same time it is not a science that can be said at any one time to have reached its finality. We are always going on evolving new things and a great many of these points that have been raised have been evolved gradually from experience. We must not assume that the stage we have reached now is the last stage of the process. I hope we shall go on evolving many more new points and go on improving our skill in this particular science, and in that way I think it not at all a bad thing that there should be differences of opinion; that one officer should think one way and one another and that they should go on practising the things in different ways until, in course of time, we shall evolve more new methods… We must remember that the increased armament of these tribes that we fight against will go on modifying our rules and systems. I think that any new expedition we might get into now will probably have to be conducted on very different lines from any we have had in the past.

As a temporary solution he suggested that particular methods should be laid down in Standing Orders issued at the beginning of any expedition to assure uniformity of tactics throughout a column.[12]

The skirmishes which occurred between Mahsud tribesmen and imperial troops along the Derajat border in the spring of 1917 reinforced the importance of specialised training for the Army in

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[11] Report of a Conference of General Officers held at Dehli 22nd to 24th February 1917 under the direction of His Excellency the Commander-in-Chief in India, (Dehli, 1917), pp.21-5 L/MIL/17/5/1759

[12] Ibid, pp.25-6

India, after heavy casualties were inflicted on inexperienced and poorly trained regulars. An unprecedented event occurred on 1st May, when 51 officers and men were killed with 59 wounded and missing primarily due to their inexperience and poor training, during an attack on a convoy between Nili Kach and Khajuri Kach.[13] The G.O.C. Northern Command noted on 2nd May 1917, that: 'If we employ troops inexperienced in hill warfare, it appears to me that incidents in the Gomal are likely to be repeated.… To frontier warfare the second reserve is quite untrained'.[14] It was all too apparent, however, that there was no longer any real difference in experience and training between any of the troops left in India and that such incidents would continue as fighting in Waziristan increased.[15] In March 1917 the Mountain Warfare School reopened at Abbottabad to provide practical training, specifically to give instruction in the principles of war with special reference to mountain warfare and to establish a common doctrine throughout the Army in India. The Commandant, Colonel W.D. Villiers-Stuart, a highly experienced officer from the 5th Gurkha Rifles (Frontier Force), was instrumental in developing innovative methods of teaching to illustrate the principles and minor tactics of what he termed 'trans-border warfare'. Six three-week long courses were held between March and October 1917, five of which consisted of 48 officers ranging in rank from Second Lieutenant to General, while the final class was reserved for 48 warrant officers and N.C.O.s. The primary aim of the school was to give its students sufficient training in hill warfare to enable them to instruct their own units and to ensure the adoption of a uniform system of training. A large part of the course, however, was devoted to studying the normal principles of war as the students were so inexperienced, before dealing with the specialised modifications required in trans-border warfare. Students were taught out by means of lectures, indoor and outdoor schemes and sand-table models which provided a theoretical idea of the tactics required in tribal territory. An attached infantry company, cavalry squadron, machine gun detachment and battery of mountain artillery, moreover, enabled instructors to demonstrate ambushes, piqueting and other minor tactics in the

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[13] Report of the Attack by Mahsuds on a Convoy Proceeding from Nili Kach to Khajuri Kach 1st May 1917, (Simla, 1917) L/MIL/7/15933
[14] G.O.C. Northern Command to C.G.S., 2nd May 1917, L/P&S/10/373
[15] C.G.S. to G.O.C. Northern Army, 3rd May 1917, L/P&S/10/373

surrounding hills, as well as providing manpower with which the students could practise while supervised by experienced officers. Particular emphasis was placed on the avoidance of ambushes, in which the tribesmen excelled. To add realism, the demonstration troops and students were opposed by Indian sepoys dressed and armed as a 'savage opponent'.[16] The practical system of training proved highly successful, making the school extremely popular. After attending the course in July 1917, Colonel H. Ross observed: 'Our course was run by Lt. Col. Villiers-Stuart who had spent practically the whole of his service on the frontier & was not only a keen & knowledgeable soldier, but a good & clear lecturer. Our work was very interesting - lectures, accompanied by practical examples in the hills. All were very well depicted. I found the course of great value to myself as it must have been for others.'[17] The lectures, pamphlets and precis produced by the school also formed the basis of booklets used to train units stationed along the border further ensuring the spread of a common doctrine.[18] During 1917 a total of 524 officers, warrant officers and N.C.O.s from units stationed throughout India attended the course before the school closed to prevent interfering with the course of normal collective training. In addition, the service press continued to provide a source of information for interested officers on the subject of mountain warfare during the war.[19]

The punitive expedition conducted in Waziristan in March-August 1917, emphasised the continued importance of training in mountain warfare. It was fortunate that the poorly trained imperial troops, accompanied by an unprecedented amount of supporting arms, services, and modern equipment to compensate for their low efficiency, encountered little serious opposition.[20] Despite the efforts of the Mountain Warfare School, a lack of uniformity in piqueting and other minor tactics of frontier warfare was still evident during the

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[16] R.M. Maxwell (ed.), Villiers-Stuart goes to War, (Edinburgh, 1990), pp.192-200 and Government of India Army Department to C.G.S., 3rd May 1917, L/MIL/7/18930

[17] The Diaries of Harry Ross, (Unpublished T.S. Memoir, 1929), p.71 Ross Mss, Mss.Eur.B.235/3

[18] See Mountain Warfare Camp and Bivouac Routine, (Ferozepore, 1917)

[19] See Lt.-Col. G.M. Baldwin,'Some Experiences of Indian Cavalry in Frontier Warfare', J.U.S.I.I., 44, 199, (1915), pp.179-88, Maj. I. Battye,'Frontier Mountain Warfare', J.U.S.I.I., 46, 206, (1917), pp.91-126 and Maj. I. Battye,'Frontier Mountain Warfare', J.U.S.I.I., 46, 207, (1917), pp.241-68

[20] Despatch by Lieutenant-General Sir Arthur Arnold Barrett, commanding the Northern Army, on the operations against the Mahsuds, March-August 1917, (Simla, 1917) L/MIL/17/13/112

fighting.[21] Although afterwards tribal activity was confined primarily to raiding, the conduct of mountain warfare remained the primary subject of study for units serving in the border cantonments. In April 1918 the Mountain Warfare School reopened at Abbottabad with an increased establishment of instructors and demonstration troops. Six courses were held between April and October, each having vacancies for 96 British officers. Two were held specifically for senior officers, while four were reserved for junior regimental officers, as a growing proportion of the temporary officers required greater elementary instruction than prior students.[22] Junior officers were given greater opportunities to practise the skills they had learnt by commanding the demonstration troops and carrying out practical exercises on the hill sides. A former chief instructor later observed:

> There is so much in this vitally important business that the average soldier in India gets no opportunity of learning. Theory and the sand table cannot teach the rapid tackling of situations unexpectedly sprung upon even the smallest body of men in a Frontier campaign. The School of Mountain Warfare supplied both the men for the students to handle, and a carefully trained enemy who did all that was least expected of them, on the rocky spurs out of Abbottabad.[23]

The Mountain Warfare School closed down in October 1918, but had succeeded in teaching and disseminating, for the first time, a common doctrine of frontier warfare to a large number of officers serving in the Army in India. Moreover, it had devised guidelines for the use in frontier warfare of new military equipment, developed during the First World War, although only small quantities had arrived in India. As a result it proved necessary to publish a new manual in June 1918, addressing the conduct of operations against both Afghan troops and the trans-border tribes and containing tentative information regarding the employment of hand and rifle grenades, Lewis Guns, and

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[21] Maj. F.O. Wyatt,'Mountain Guns for Mountain Warfare', J.U.S.I.I., 47, 210, (1918), p.103
[22] Government of India Army Department to C.G.S., 15th May 1918, L/MIL/7/18930
[23] G. Dunbar, Frontiers, (London, 1932), pp.301-2

Vickers machine guns in tribal territory.[24] However, despite a total of 988 officers and 204 N.C.O.s having attended courses held at Abbottabad during the course of the war, the vast majority of units in India were still far below pre-war standards of training in mountain warfare.[25]

The Afghan invasion on 4th May 1919 directed military attention in India towards the North-West Frontier when regular troops crossed the Durand Line and occupied the village of Bagh at the head of the Khyber Pass. It soon became apparent that their plan of campaign depended on the active participation of the Pathan tribes on both sides of the border. Throughout the war strenuous efforts were made by the Afghans to enlist tribal support by calls for jihad and gifts of money and arms. Such concerns proved well founded as throughout the war the tribes proved far more formidable opponents than Afghan regulars. The three frontier brigades and militia proved incapable of dealing with the situation unaided, resulting in the piecemeal commitment of the Field Army and the deployment of 340,000 imperial troops. The Indian Army, however, was no longer the highly efficient force it had been in 1914, largely as a result of the heavy casualties and the influx of new officers and men during the war. Units remaining in India were now predominately composed of new recruits and 'old soldiers', whilst most trained and experienced troops remained scattered across the Middle East and Africa.[26]

The Afghan troops were quickly ejected from Bagh on 11th May, in an endeavour to forestall local tribal risings. After the position had been captured by imperial troops with air support, further reinforcements were concentrated in preparation for an attack across the Durand Line.[27] When the 1st (Peshawar) Division occupied Dakka in Afghanistan on 13th May it divided the Mohmands and Afridis and prevented them from joining with Afghan troops. However, when Afghan troops and tribesmen appeared at Chitral, Mohmand country, the Peiwar Kotal and Fort Baldek in Baluchistan the situation worsened. The Afghan troops and tribesmen in the Gandab Valley, however, withdrew

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[24] Notes on Trans-Border Warfare with special reference to the Combination of Various Arms and Weapons, (Calcutta, 1918) 2nd Ed. 1919

[25] Report on the Principal Measures, p.18

[26] Despatch by His Excellency General Sir Charles Carmichael Monro on the Third Afghan War, (Simla, 1919), pp.1-2, L/MIL/17/14/68 (Hereafter Despatch on Third Afghan War), and The Third Afghan War 1919. Official History, (Calcutta, 1926), pp.17-19 (hereafter Official History 1919)

[27] Report of the Action at Bagh Springs 11th May 1919, (Simla, 1919) L/MIL/7/16924

when they failed to induce the Mohmands to attack Shabkadr. At Chitral a secondary Afghan operation was repulsed by local forces while other Afghan troops were quickly defeated at Spin Baldek in Baluchistan and forced to withdraw. The security of the Khyber Pass became of paramount importance and piquets were constructed between Dakka and Haft Chah to secure the road. Despite the deployment of an entire infantry brigade, Afridi tribesmen sniped the road, cut telegraph and telephone lines, ambushed convoys and constructed road blocks. Elements of the 6th Infantry Brigade carried out punitive operations against hostile tribesmen near Ali Musjid on 15-16th May but, on several occasions, hostile lashkars gathered in the surrounding hills. Following the desertion of large numbers of its men with their arms and equipment, the Khyber Rifles was disbanded on 17th May. BE2C aircraft attacked the Afghan line of communications near Dakka, while ground operations were in progress and carried out air raids on Jalalabad on the 17th, 20th and 24th May 1919, destroying the military quarter of the town and dispersing a parade of Afghan troops. During the confusion Afridi and Mohmand tribesmen looted arms, ammunition and equipment from their erstwhile allies and then dispersed into the surrounding hills. Kabul was also bombed on 24th May by a single four-engined Handley Page aircraft.[28]

The Afghan offensive from Khost, which commenced on 23rd May 1919, was considerably more successful when regulars and tribesmen advancing down the Kaitu Valley enlisted the active support of local Wazir sections. Isolated detachments of the North Waziristan Militia and regular troops in the Upper Tochi Valley were ordered to evacuate their posts and withdrew to within the administrative border. The militia at Miranshah however, mutinied, seizing weapons and ammunition from the fort, setting off several similar incidents by smaller detachments stationed in the lower Tochi Valley. At Wana and in the Gomal, Afridi and Wazir officers and men in the South Waziristan Militia mutinied, forcing their British officers and the remaining loyal sepoys to withdraw under heavy attack. Further desertions occurred en route and, after suffering serious casualties, the survivors finally reached safety at Mir Ali (See Figure 6).[29] The

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[28] Despatch on Third Afghan War, p.10, and Official History 1919, p.49

[29] Major G.H. Russell, Commandant South Waziristan Militia, to Inspecting Officer Frontier Corps, 15th June 1919, L/P&S/11/155 and C.C. Trench, The Frontier Scouts, (London, 1986), pp.38-45

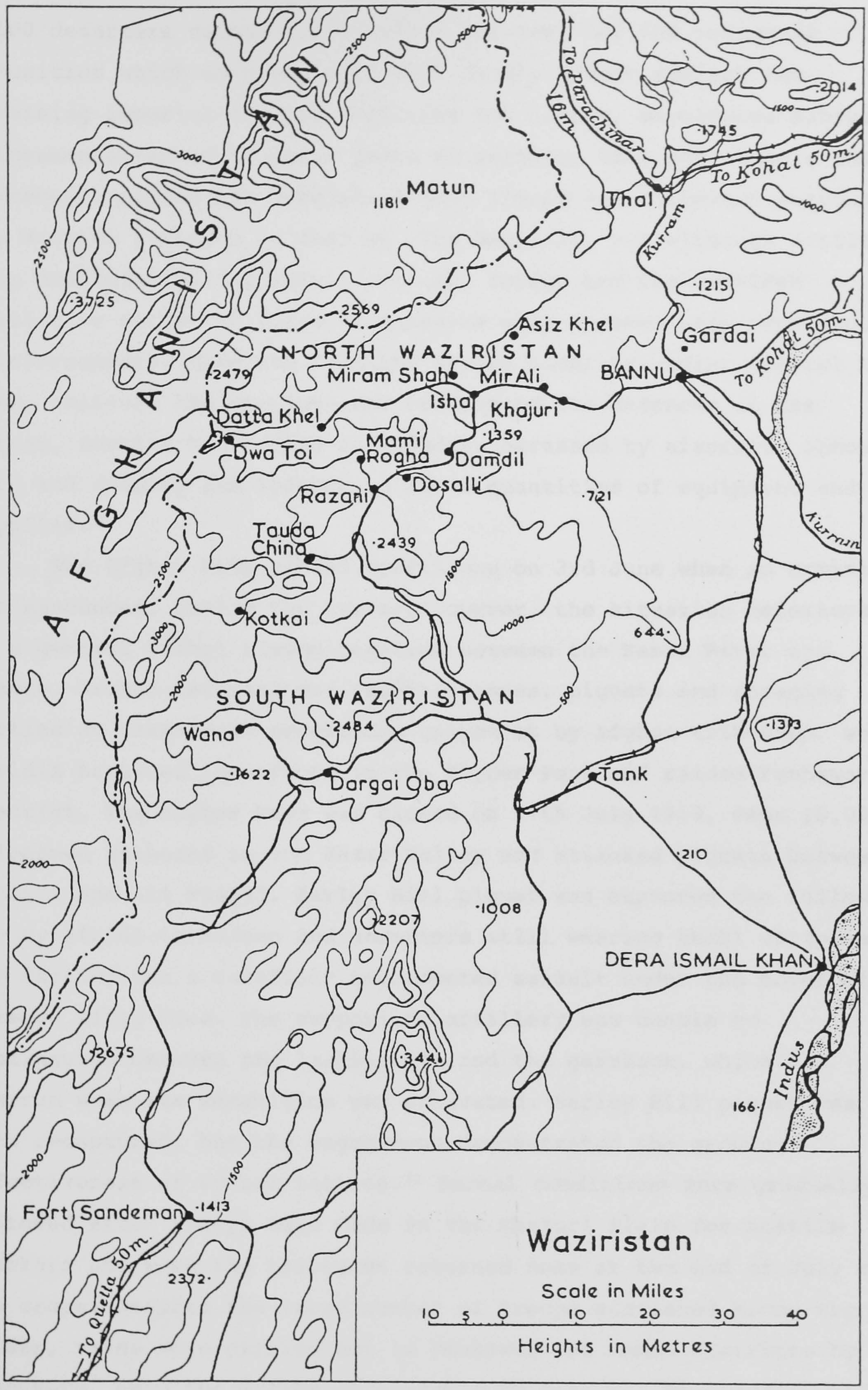

Figure 6. Waziristan and the Derajat

1,100 deserters seized 1,190 rifles and over 700,000 rounds of ammunition which were employed with deadly effect against the remaining imperial troops. Following the mutiny, emboldened Mahsud tribesmen attacked isolated posts at Dardoni, Idak and Jandola and commenced raiding the Derajat. Afghan troops and tribesmen surrounded the British garrison at Thal on 27th May 1919, but although artillery fire destroyed petrol dumps, rations, forage and the wireless station, a series of infantry assaults were successfully repulsed. Reinforcements, diverted from the Khyber under Brigadier General R.E. Dyer, relieved the garrison and buttressed the defences in the Kurram, forcing Nadir Shah to withdraw harassed by aircraft, armoured cars and cavalry and abandoning large quantities of equipment and supplies.[30]

The Afghan Army ceased operations on 3rd June when an armistice was announced. During the summer, however, the situation deteriorated as a general tribal rising occurred between the Kabul River and Chaman. Troops carrying out reconaissances, piquets and foraging parties at Dakka were repeatedly sniped at by Afghan tribesmen, while Afridis harassed the troops in the Khyber Pass and raided Peshawar District. The Khyber Pass was closed on 17th July 1919, when 10,000 tribesmen gathered in the Bazar Valley and attacked piquets between Bagiari and Ali Musjid. Barley Hill piquet was captured the following day by Afridi tribesmen and deserters still wearing khaki uniforms, who carried out a carefully implemented assault under the cover of intense rifle fire. The supporting artillery was unable to distinguish between the lashkerwals and the garrison, which was overrun when its ammunition was exhausted. Barley Hill piquet was soon recaptured, but the engagement demonstrated the growing effectiveness of tribal tactics.[31] Normal conditions were gradually restored after sweeps were made in the Khajuri Plain for hostile lashkars and when the tribesmen returned home at the end of July to sow crops. Despite the large number of troops stationed along the border, raids were carried out in Peshawar and Kohat districts by deserters, whom the maliks were unable to control. The Derajat border remained the main source of concern to the imperial authorities as Waziristan Force struggled to relieve isolated posts and prevent

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[30] Report by Brigadier General R.E.H. Dyer on the Operations for the Relief of Thal May-June 1919, (Simla, 1919) L/MIL/7/16924

[31] Official History 1919, pp.76-8

Mahsud raids. A high proportion of ex-servicemen and ex-militiamen in the ranks of Mahsud and Wazir lashkars added materially to their effectiveness. Indeed, their knowledge of piqueting methods employed by Indian troops and fire and movement contributed directly to a successful attack carried out on a piquet near Drazinda and an attack on a convoy at Kapip.[32]

The Third Afghan War ended officially on 8th August 1919, but settlements with the independent tribes were hindered by Afghan officials and raiding occurred on an unprecedented scale. Afridi attacks in the Khyber Pass and across the border of Peshawar and Kohat Districts increased during the autumn, despite large numbers of troops remaining in the area. Apart from the destruction of Chora Fort in the Bazar Valley, however, punitive operations against the Afridis were limited to a blockade due to serious fighting in the Derajat and the dangers inherent in carrying out operations in Tirah.[33] Along with local irregulars, Indian troops concentrated on intercepting Afridi and Orakzai raiding gangs in Peshawar and Kohat Districts and imposing a blockade of tribal territory while a political settlement was arranged. However, it was decided that, following the end of hostilities, imperial troops would remain in occupation of the Khyber Pass.[34] The situation in the Derajat steadily deteriorated between 9th August and 18th November 1919, as Mahsud and Wazir raiding gangs, varying in size between 70-600 tribesmen, committed 182 offences in Zhob, the Derajat, and the Punjab, killing 225 British subjects, wounding 276 and kidnapping and ransoming a further 126 civilians; in the process large quantities of camels, cattle and private property were stolen and carried off into the hills.[35] The punishment of the Mahsuds and Wazirs was judged essential to restore British prestige and maintain the security of the administrative border. During the autumn, military operations in

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[32] Report by Major-General Skipton Hill Climo on the operations of the Waziristan Field Force (Destruction of Drazinda) 24th June to 8th July 1919, (Simla, 1919) L/MIL/17/13/118 and Reports by G.O.C. Baluchistan Force on the Operations in the vicinity of Lakaband, Kapip and Fort Sandeman 13th-18th July 1919, (Simla, 1919) P.R.O. WO106/56

[33] Report by Major-General Sir C.M. Dobell on Operations on 13th September 1919, resulting in the Destruction of Chora Fort, (Simla, 1919) L/MIL/7/16924

[34] Viceroy, Foreign and Political Dept, to SSI, 22nd Dec. 1919, L/MIL/7/15939 and Summary of Chief Events in North-West Frontier Tribal Territory from 8th August 1919 to 31st December 1920, (Delhi, 1921), pp.6-12 L/MIL/7/16944

[35] Chief Commissioner N.W.F.P., to Foreign Secretary to the Government of India in the Foreign and Political Department, 3rd Dec. 1919, L/P&S/11/167

Waziristan were delayed, however, by a shortage of transport, extremely hot weather in the Derajat and because the majority of Indian troops were war-weary and unready for further operations. Tribal morale remained high as a result of the mutinies amongst the militia, repeated successful raids, the presence of Afghan troops in Waziristan and gifts of arms and ammunition which convinced them that the British were unable to maintain control. A shortage of officers and a lack of training amongst the local Indian garrisons resulted in many successful tribal attacks. In explanation the Viceroy observed in October 1919:

> We have roughly two experienced officers per battalion in the Indian Army. The rest are men of practically no military experience and certainly no frontier war experience. Moreover, the troops on the whole, have very short service. The result is that vis-a-vis the Wazir and Mahsud our men are inferior, and the officers, through their inexperience, are unable to make up for deficiencies in the rank and file. It was because of this inexperience of our officers and troops that during the recent operations we had to mass such large forces on our frontier. And, as in the case of tribal operations the junior officer have to take responsibility for the work, we must expect these set-backs from time to time.[36]

The size of the force which was assembled during the autumn of 1919 was unprecedented, reflecting the serious fighting that was anticipated and the recognised poor quality of the available troops. A total of 29,256 raw, untrained Indian troops and 33,987 non-combatant followers were placed under the command of Major-General S.H. Climo, organised into six infantry brigades, four infantry battalions, four cavalry regiments, sappers and miners and two mountain batteries. The combatant troops were accompanied by large quantities of supporting units - field ambulances, hospitals, survey detachments, postal units, pigeon lofts and photographic sections - as well as large numbers of unarmed followers greatly increasing the size of the force, the number of transport animals and the size of

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[36] Chelmsford to Montagu, 8th Oct. 1919, Montagu Mss Mss.Eur.D.523/9

supply columns.[37] Despite repeated requests by the G.O.C. a notable exception from the order of battle were any battalions of the Machine Gun Corps, as acclimatised British troops were unavailable beyond those serving in Indian units and the officers and men of No. 6 Mountain Battery. While intermittent fighting continued, the employment of new weapons on the North-West Frontier was also discussed. During the autumn Major-General C.H. Foulkes, the former Director of Gas Duties in France, toured the border to evaluate the potential use of poison gas in frontier warfare. A memorandum was circulated by the C.G.S. to local commanders in November based on his appreciation describing its capabilities and possible tactical employment, which was favourably received by both senior military and political officers.[38] Indeed, the commander of Waziristan Force requested that gas should be employed in the forthcoming operations against the Mahsuds.[39] Following its successes during the Third Afghan War, the R.A.F. was given an opportunity to carry out independent bombing raids after modern Bristol fighters, D.H.9 and D.H.10 bombers augmented the small detachment of now antiquated and unreliable BE2C aircraft based at Tank. During the autumn small-scale punitive bombing operations were mounted in Waziristan in reprisal for raids, but it proved difficult to obtain reliable information regarding the impact of bombing on the local inhabitants.[40]

The Tochi Valley was occupied on 18th November 1919 by two brigades without resistance, apart from one small section inhabiting an area remote from the main valley. After being bombed by 17 aircraft on 19th November, however, the Madda Khel Wazirs accepted British terms. Throughout the operation, fighting was marked by its absence, but piqueting and the defence of perimeter camps provided useful instruction in mountain warfare for the inexperienced troops. While operations in the Tochi were underway between 13th-21st November R.A.F. aircraft bombed Mahsud settlements at Kaniguram, Makin and Marobi after the Mahsuds failed to comply with terms,

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[37] Despatch by His Excellency General Sir Charles Monro on the Operations in Waziristan, (Simla, 1920), p.3 L/MIL/7/16930 (Hereafter Despatch on Waziristan)

[38] E.M. Spiers,'Gas and the North-West Frontier', J.S.S., 6, 4, (1983), pp.99-102 and Maj.-Gen C.H. Foulkes,'Memorandum on the use of Gas in Frontier Warfare, 3rd Nov. 1919, Foulkes Mss, L.H.C.M.A. 6/105

[39] Climo to Wigram, 14th Nov. 1919 Foulkes Mss, L.H.C.M.A. 6/105

[40] Waziristan Force Weekly Appreciation for week ending 18th October 1919, P.R.O. WO 106/56, Royal Air Force, India. Summary of Operations 28th September to 8th October (inclusive), 7th Nov. 1919, L/MIL/17/5/4118

dropping a daily average of 10,000 lbs of bombs. Intermittent bombing continued until the end of the month, destroying stocks of fodder and food and causing cultivation to cease, villages to be evacuated and a decline in raiding after livestock was dispersed into small flocks requiring men for their protection. When it appeared that all prior targets had been destroyed, aircraft commenced attacking houses belonging to influential maliks in an endeavour to force them to agree terms with the imperial authorities. Despite R.A.F. claims to have inflicted severe damage, however, it was soon evident that the Mahsuds would not submit and that ground operations would be necessary.[41]

The two brigades that had occupied the Tochi Valley and other supporting units reorganised at Jandola during early December, while air operations continued, in preparation for operations against the Mahsuds in central Waziristan. The decision to employ a single striking force, renamed the Derajat Column ('Deracol') on 27th November under the command of Major-General Andrew Skeen, reflected the shortage of transport, the large winter scale of baggage and stores required, the recognised low fighting ability of the raw and untrained regiments available and the large numbers of breech-loading rifles in Mahsud hands. A single line of communication also required fewer troops, a smaller number of administrative units and reduced the demand for transport and supplies. Moreover, it was hoped a single column would encourage the tribesmen to mass, giving imperial troops an opportunity to inflict a decisive defeat at the outset of the campaign.[42]

The Derajat Column met little resistance when it advanced up the Tank Zam Valley on 18th December 1919, but it halted at Palosina to build a perimeter camp and permanent piquets to secure its line of communication. An initial attempt to construct a camp piquet on Mandanna Hill on 19th December, however, ended in disaster when the 1/55th Rifles and the 1/103 Mahratta Light Infantry were repulsed, with 95 dead and 140 wounded, by a strong Mahsud lashkar which captured 131 rifles and 10 Lewis guns from the disorganised sepoys

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[41] Waziristan Force Weekly Appreciation for week ending 22nd November 1919 and week ending 6th December 1919, P.R.O. WO 106/56 and Royal Air Force India. Summary of Operations from 9th November to 15th December 1919 (inclusive), 11th Jan. 1920, L/MIL/15/5/4120

[42] Waziristan Force Appreciation of the situation from 7th to 16th December 1919, P.R.O. WO 106/56 and Operations in Waziristan 1919-20, (Calcutta, 1921), pp.92-3 Hereafter Waziristan 1919-20)

(See Figure 7).[43] 19th December 1919 was dubbed 'Derby Day' by the troops remaining in camp who watched as both battalions raced to the security of the encampment below. The failure of the attack caused consternation, and the Derajat Column 'stood to' all night anticipating an assault by the tribesmen.[44] Mandanna hill was captured the following day when a full brigade supported by all the available artillery and aircraft was committed. A 110 man garrison belonging to the 2/19th Punjabis, occupying hastily constructed sangars on the hill, was overrun by 20-50 Mahsud tribesmen, while attempting to consolidate its position. The demoralised survivors, abandoning rifles, Lewis Guns and other equipment, frantically withdrew to the safety of the perimeter camp in the valley below pursued by a Mahsud force half their strength. The Derajat Column was forced onto the defensive, although on 21st December, 67th Brigade attempted to construct a piquet at 'Black Hill' or Tarakai to the north of the perimeter camp in an endeavour to restore the column's badly shaken morale. The covering detachment, protecting the working party building sangars, was attacked and overrun by 800-1,000 Mahsud swordsmen, protected by intense rifle fire from ranges of 1,500 yards, who approached unseen through the broken terrain. Intense hand-to-hand fighting occurred around the position, but the 3-24th Sikh Pioneers were forced to withdraw when their supply of ammunition and grenades was exhausted. An attempted counterattack failed ignominiously, although heavy supporting artillery fire broke up the massed tribesmen - inflicting 250 dead and 300 wounded - while the covering troops withdrew to the safety of the perimeter camp below. However, the Derajat Column had lost a further 66 dead and 250 wounded during the engagement.[45]

The heavy casualties inflicted on the Derajat Column between 19th-21st December 1919 indicated that the majority of its infantry battalions were incapable of carrying out comparatively simple tactical operations against the tribesmen. A combination of poor leadership, a lack of basic individual training and ignorance of the

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[43] G.O.C. Waziristan Force to War Section, Dehli, 20th Dec. 1920, L/P&S/10/870 and Waziristan 1919-20, p.102

[44] D. Rees, Indian General Service Medal, (Unpublished TS Memoir, 1955), Vol. 4 pp.181-8 N.A.M. 6706-21 and Ross, op cit, pp.47-9 Ross Mss, Mss.Eur.B.235/4

[45] G.O.C. Waziristan Force to War Section, Dehli, 22nd Dec. 1919, L/MIL/17/5/4119, Waziristan 1919-20, pp.102-6, and Capt. D. Rees, Pioneer Piquet. 21st December 1919, (London, 1954)

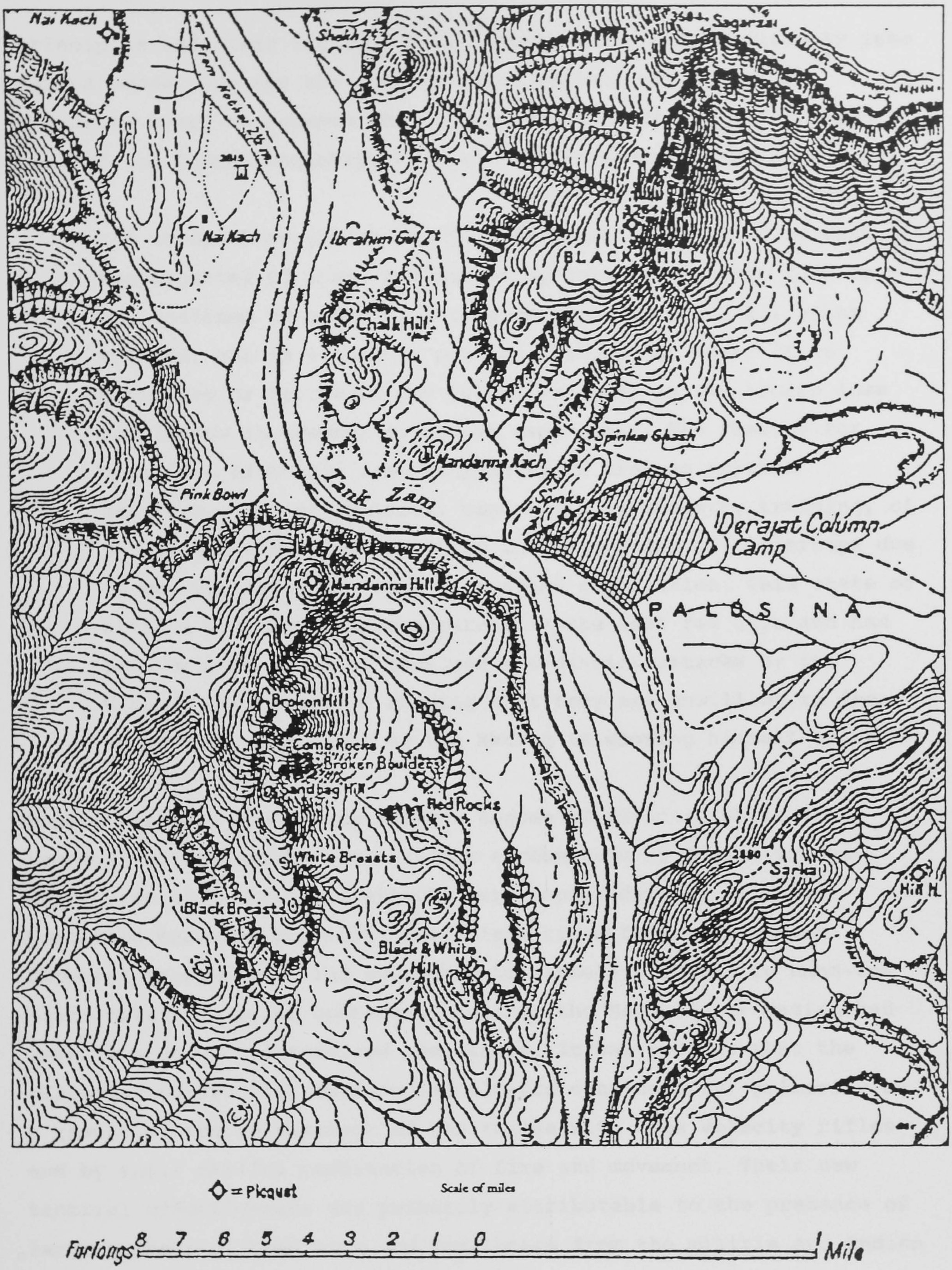

Figure 7. Map to illustrate operations in the area surrounding Palosina Perimeter Camp 19th/20th December 1919

principles and minor tactics of hill warfare had played directly into Mahsud hands. Perhaps the most alarming feature was the wide disparity revealed between the fighting ability of the Mahsuds and that of the Indian infantry. Writing on 23rd December, Climo warned:

> The troops have not shown the determination or tenacity that was expected of them. A disquieting feature, is that this is not confined to one unit but is showing itself in all units engaged, and is liable to produce a situation that, if it continues or increases may become serious, as the troops lose confidence in themselves and in each other. The reasons for this lack of morale are the paucity of trained British Officers, want of training, especially in musketry training, of the troops and a deterioration in the quality of the troops due to war-weariness and lack of trained supervision. This state of affairs has only become apparent in the last few days and has been brought about by fearless and dashing attacks by the Mahsuds, our infantry showing that they are unwilling to face so strong an opponent as the Mahsud is showing himself to be.[46]

Mahsud lashkars had demonstrated a degree of military skill and tactical effectiveness never before encountered by Indian troops. Their carefully organized attacks were unprecedented, with well-concealed marksmen providing sufficient rifle fire to pin down imperial troops, enabling swordsmen to close and engage in hand-to-hand combat. In prior operations neither the Mahsuds nor Wazirs had ever offered such determined resistance. It was evident that the character of frontier warfare had altered considerably, primarily as a result of the re-armament of the tribes with high velocity rifles and by their skilful combination of fire and movement. Their new tactical effectiveness was primarily attributable to the presence of large numbers of deserters and pensioners from the militia and Indian Army in their ranks. An estimated 2,000 ex-servicemen formed approximately one-fifth to one-sixth of the Mahsud fighting strength encountered during the initial phase of the campaign, providing

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[46] Waziristan Force Weekly Appreciation for week ending 23rd December 1919, P.R.O. WO 106/56

lashkars with leadership, discipline and tactical training.[47] Despite being highly effective, however, these new tactics were vulnerable to artillery fire, Lewis guns, and aircraft and dramatically increased their own casualties. As a result the lashkars dispersed on 21st December, in heavy rain, to replenish their stores, bury their dead and remove their wounded from the fighting at Tarakai which was occupied the following day without resistance. The discovery of over 50 dead Mahsuds and large numbers of abandoned rifles near the position provided an indication of tribal losses. The column was given a breathing space which it used to build further permanent piquets to safeguard the perimeter camp and the line of communications without any serious opposition.[48]

The Mahsuds nearly inflicted a decisive defeat on the Indian Army in the hills around Palosina. Morale was badly shaken by the heavy losses and the apparent inability of imperial troops to secure piquets in the surrounding hills. After two days' operations the column had marched only three miles and had suffered three serious defeats. The Brigade Major of 43rd Brigade observed: 'We had realized that our troops were untrained in mountain warfare and they would have to buy their experience, but we had hoped that the price would not be so high. Only a few people… realized how close we had come to a real débâcle.'[49] As a result Climo and Skeen met the C.G.S. at Khirgi on 21st December, where they both requested immediate reinforcements to bolster their badly shaken troops as well as permission to employ poison gas.[50] Although the C.G.S. was more confident than his subordinates, he concurred with their appreciation and ordered two battalions of Gurkhas to proceed immediately to Waziristan.[51] To compensate for the poor quality of his troops Major-General Climo ordered Skeen henceforth to attack with at least a full brigade and to ensure that all piquets were thoroughly fortified before proceeding with further operations.[52] As a result of poor weather, which limited air support, the column halted until 28th

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[47] Despatch on Waziristan, p.10, Waziristan 1919-20, p.108 and Maj.-Gen. A. Le G. Jacob,'Waziristan', R.E.J., 42, (1928), p.227

[48] G.O.C. Advanced Waziristan Force to War Section, Dehli, 23rd Dec. 1919, L/P&S/10/870 and Despatch on Waziristan, p.10 L/MIL/7/16930

[49] Sir J. Smyth, Milestones, (London, 1979), p.70

[50] G.O.C. Waziristan Force to War Section, 21st Dec. 1919, L/P&S/10/870 and G.O.C. Waziristan Force to War Section, Dehli, 22nd Dec. 1919, L/MIL/17/5/4119

[51] Viceroy, (Army Department), to SSI, 22nd Dec. 1919, L/MIL/17/5/4119

[52] G.O.C. Waziristan Force to the War Section, Dehli, 22nd Dec. 1919, L/MIL/17/5/4119

December 1919 to reorganise and secure its line of communications. Despite no repetition of the earlier incidents concern remained high over the fighting quality and morale of the troops at Palosina. As a result two unreliable battalions were removed from the Derajat Column and withdrawn below Khirgi. The commander of Waziristan Force reiterated his earlier concerns on 30th December 1919:

> The actions last week have given some valuable lessons which will be of immediate interest and importance… Those operations have shown the vital necessity of regaining some standard of musketry efficiency. Marksmanship and fire discipline are two of the first essentials in frontier fighting and the present Indian Army as a general rule has never learnt these two arts. The result is that as the men have no faith in their rifles, they have little self-confidence and look to auxiliaries, such as Artillery, aeroplanes and Lewis guns for their protection and to win the battle. In this connection, it may be remarked that practically none of the junior British officers have had experience of hill warfare and experience of warfare against a civilised and organised enemy is not necessarily good training for hill warfare against a savage enemy. In civilised warfare much dependence is placed on artillery and machine gun fire and the lower the standard of training, the greater is the dependence of the Infantry on other arms till the time is reached when the necessity for marksmanship and fire discipline is almost forgotten and fails to be realised by officers who may never have known it. Nothing can replace these arts, and frontier warfare must remain expensive on lives and rich in unpleasant incidents until our infantry regain some of their ancient knowledge of musketry and fire discipline and so get renewed confidence in themselves and in their weapons.[53]

To compensate for the low quality of his poorly trained and badly shaken troops, Skeen relied heavily on superior numbers and heavy fire support from his battery of 3.7" howitzers and Lewis guns, and continuous close co-operation by aircraft. Indeed, he was so

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[53] Waziristan Force Weekly Appreciation for week ending 30th December 1919, P.R.O. WO 106/56

convinced of the need for air support that no further advances were attempted until the weather permitted its use.[54] Lewis guns proved more of a liability than an asset, however, as Indian troops were so badly trained that they expended vast quantities of ammunition to little effect. Many weapons were lost during December due to poor training, and as a result Lewis guns had to be withdrawn from individual battalions and massed to form battalion or brigade reserves under the direct supervision of British officers.[55] During December, the Striking Force was hurriedly reinforced by Gurkha and Frontier Force battalions replacing a further three badly-shaken units that were relegated to the lines of communication.[56] In addition, forty experienced officers were collected from units throughout India and the Middle East and sent to bolster the regiments already in Waziristan.[57]

The Mahsud resistance, poor weather and the difficult terrain along the Tank Zam Valley forced Skeen to mount a slow, deliberate, methodical advance during late December and early January, of only 2-4 miles a day, interspersed by frequent halts to construct permanent piquets, protect the lengthening line of communications and to amass stores.[58] An attack on the 4-39th Garwhal Rifles on 2nd January, while constructing a piquet north-west of Kotkai, however, gave some grounds for optimism, when its comparatively well-trained, well-led and disciplined troops defeated the tribesmen in hand-to-hand fighting. Indeed, the morale of the Derajat Column slowly improved as the promised Gurkha battalions and drafts containing a large proportion of trained and seasoned senior officers arrived. As the fighting continued it was all too evident that major changes had occurred in the nature of frontier warfare and that conditions had altered in disfavour of imperial troops. On 6th January 1920 Major-General S.H. Climo outlined the difficulties faced by the troops in Waziristan:

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[54] G.O.C. Advanced Waziristan Force to War Section, Dehli, 24th Dec. 1919, L/P&S/10/870 and Royal Air Force, India, Summary of Operations from 16th December to 31st December 1919 (inclusive), 4th Feb. 1920, L/MIL/17/5/4119

[55] Waziristan Force Weekly Appreciation for the week ending 30th December 1919, P.R.O. WO 106/56

[56] R.A. Curties, '7 (Bengal) Indian Mountain Battery, 1919-20', in C.H. MacFetridge and J.P. Warren, (eds.), Tales of the Mountain Gunners, (Edinburgh, 1973), p.101

[57] Commander-in-Chief in India, to the G.O.C. Egyptian Expeditionary Force, 23rd Dec. 1919, L/MIL/17/5/4119

[58] G.O.C. Advanced Waziristan Force to Foreign Secretary, 27th Dec. 1919, L/P&S/10/870

> My operations are disclosing much that is new to Frontier Warfare and a short summary of the more important developments will be of interest. The factor which affects everything is the prevalence amongst the tribes of low trajectory rifles with an adequate supply of smokeless ammunition.… The tribesmen therefore have the arms and ammunition for covering fire. This they employ, and under its cover they are able to concentrate for attack and carry out much of their approach after concentration. This to some extent accounts for the fact that they are not hesitating to attack uphill, and though this is assisted by the poor shooting abilities of the infantry, the latter fact does not fully account for the uphill attacks which have so seldom been met with in former campaigns, and it should be realised that the tribesman is now a more scientific fighter than he has been of the past… Another obvious result of the improvement of armament is the increase in casualties. There has not been much sniping into camp so far… the tribesmen are realising that unaimed fire is a waste of ammunition… Day sniping in consequence has increased and is responsible for many casualties. It is most difficult to compete with in broken and hilly country such as the Column is operating in at present.[59]

The range, rate of fire and accuracy of .303 magazine rifles enabled Mahsuds and Wazirs to deliver effective fire on Indian columns and inflict casualties at ranges of 1,000-1,200 yards. As had been demonstrated twenty-one years before in the Bara Valley, individual snipers, or small parties of tribesmen, firing at long range with modern rifles could now seriously impede or halt the progress of an Indian column. Tribal marksmen hidden on the broken hill sides and employing smokeless ammunition were exceedingly difficult to locate, causing the advance to grind to a halt until the snipers had been killed, suppressed or forced to move position. Imperial troops resorted to heavy prophylactic fire in an endeavour to suppress snipers, but this usually proved ineffective, bad for morale and

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[59] Waziristan Force Weekly Appreciation for week ending 6th January 1920, P.R.O. WO 106/56

consumed vast quantities of ammunition further exacerbating transport and supply difficulties. Moreover tribal tactics became increasingly sophisticated, indeed lashkars deliberately restricted older black powder Enfield, Snider, and Martini-Henry rifles to use at night to prevent betraying tribal positions.[60]

The main task of the Derajat Column was to precede each march by the construction and occupation of heavily fortified permanent piquets to protect the main body of the column as it moved towards Kaniguram. Such piquets had now to be built at distances of 1,000-1,500 yards at commanding points on either side of the route of march to keep snipers out of effective range. Their placement and withdrawal was frequently heavily contested by lashkars so that a full brigade had to be deployed. The strength of Mahsud resistance and their modern rifles meant carefully organised deliberate attacks had to be staged by the Derajat Column, requiring close co-operation between mountain artillery, machine guns and the R.A.F. In many ways this approximated to European conditions, but there remained important differences in methods due to the terrain and tribal tactics. The range of .303 rifles meant attempts to outflank Mahsud positions were more tiring and time-consuming, often ineffective, and had to cover longer distances than before. Indeed, the distinction between a deliberate attack and the seizure of piquet positions became blurred, as the advance resolved itself into a constant series of engagements to force the tribesmen back frontally and on both flanks, with continuous fighting to secure piquets and cover the movement of transport columns. Imperial troops fought a heavily-pressed rearguard action at the end of each day, as they withdrew to the security of a perimeter camp harassed relentlessly by Mahsud riflemen, who did not hesitate to engage in hand-to-hand combat when an opportunity offered.[61] It was impossible to ensure that all commanding positions within effective rifle range of a column were occupied, and piquets had to employ their weapons to deny tribesmen all other potentially threatening terrain features and keep them at a respectable distance. Piquet positions themselves were now frequently overlooked from the surrounding hills and had to be heavily fortified with stone walls, traverses, and belts of barbed wire to protect

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[60] Waziristan 1919-20, p.97

[61] Smyth, op cit, p.68

their garrisons from rifle fire or direct assault. This required large quantities of engineering stores and a considerable amount of time and labour. Each piquet took a day on average to construct, and often led to heavy fighting as the Mahsuds offered determined resistance. Between 29th December 1919 and 8th January 1920 the Striking Force lost 42 dead, 163 wounded and 30 missing during such operations, which often required the commitment of the full strength of the column to seize a commanding feature and then protect working parties from Mahsud counterattacks.[62]

The Derajat Column was also completely dependent on a permanent fixed line of communications. It was impossible for imperial troops to operate further than three days' radius of action from the line of communication without reducing medical services, ammunition columns and defence stores to below an acceptable level. A total of 1,400 mules and 1,800 camels (excluding first line animals carrying equipment with units) accompanied the advancing troops, while 2,000 camels worked on the lines of communication.[63] The vastly increased scale of supporting arms, equipment and medical services now required by imperial troops compounded the transport problem, causing a further decline in mobility and speed of movement. The tactics adopted by the Indian troops further exacerbated transport and supply problems as expenditure of ammunition, in addition to food, clothing and engineering stores, spiralled to unprecedented levels. A halt was required after each stage of the advance to await the collection of sufficient stores, causing as much delay as tribal resistance. It was necessary to ensure the security of the line of communication and widen tracks, as convoys were required on a daily basis to evacuate casualties and replenish supplies. The protection of convoys necessitated the permanent occupation of heavily fortified piquets at half-mile intervals held by large garrisons throughout the operations, in place of the small temporary detachments that had hitherto been used in frontier warfare. In the face of strong tribal opposition, it was simply too costly to piquet commanding features on a daily basis. Their construction further exacerbated the supply problem as they required large quantities of barbed wire, stakes and defence stores. In addition, moveable columns were required in each

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[62] Notes from War Diaries, Part DCL Waziristan Force, May 1920, L/MIL/7/18853
[63] Ibid

section of the line of communication to escort convoys and carry out punitive operations in the immediate vicinity.

The cumulative effect of the improvement in tribal armament and tactics on the conduct of mountain warfare was to slow every phase of the operations in Waziristan. Climo concluded:

> I am of opinion that the days of lightning frontier campaigns, except against insignificant tribes, are over. Such campaigns must be more deliberate, will entail more troops for the defence of the communications, will require more transport and will be more expensive in lives, but the results to be obtained will probably be better and more lasting as we will take heavier toll of the enemy and will sensibly reduce his stock of fighting men.[64]

The Derajat Column halted at Kotkai until 7th January, while preparations were made to advance through the precipitous 80 yard Ahnai Tangi gorge. As a precursor to an attack on the main position, it was necessary to seize and consolidate positions on the heights along both flanks of the valley around the entrance of the gorge. Intense tribal resistance and difficult terrain made it impossible to complete the positions before night fall on 7th January, so the 43rd and 67th Brigades returned to camp (See Figure 8). An attempt to construct a piquet near Zeriwam on 9th January had to be abandoned as darkness approached after heavy attacks. Fighting the following day was equally unsuccessful when the covering troops were forced to withdraw by heavy and accurate sniping. The casualties suffered on the 9-10th January amounted to a further 170 killed and wounded, but the vital positions on the east flank of the valley remained in tribal hands. The continued strong opposition around the entrance to the gorge prompted Major-General Skeen to risk a night advance to secure positions overlooking the Ahnai Tangi, before the surprised tribesmen could organise an effective defence and to nullify the impact of their rifles.[65] Despite the scepticism of experienced officers, the attack carried out by 43rd and 67th Brigades on 11th January 1920, across difficult terrain, achieved complete surprise

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[64] Waziristan Force Weekly Appreciation for week ending 6th January 1920, P.R.O. WO 106/56

[65] Smyth, op cit, p.72

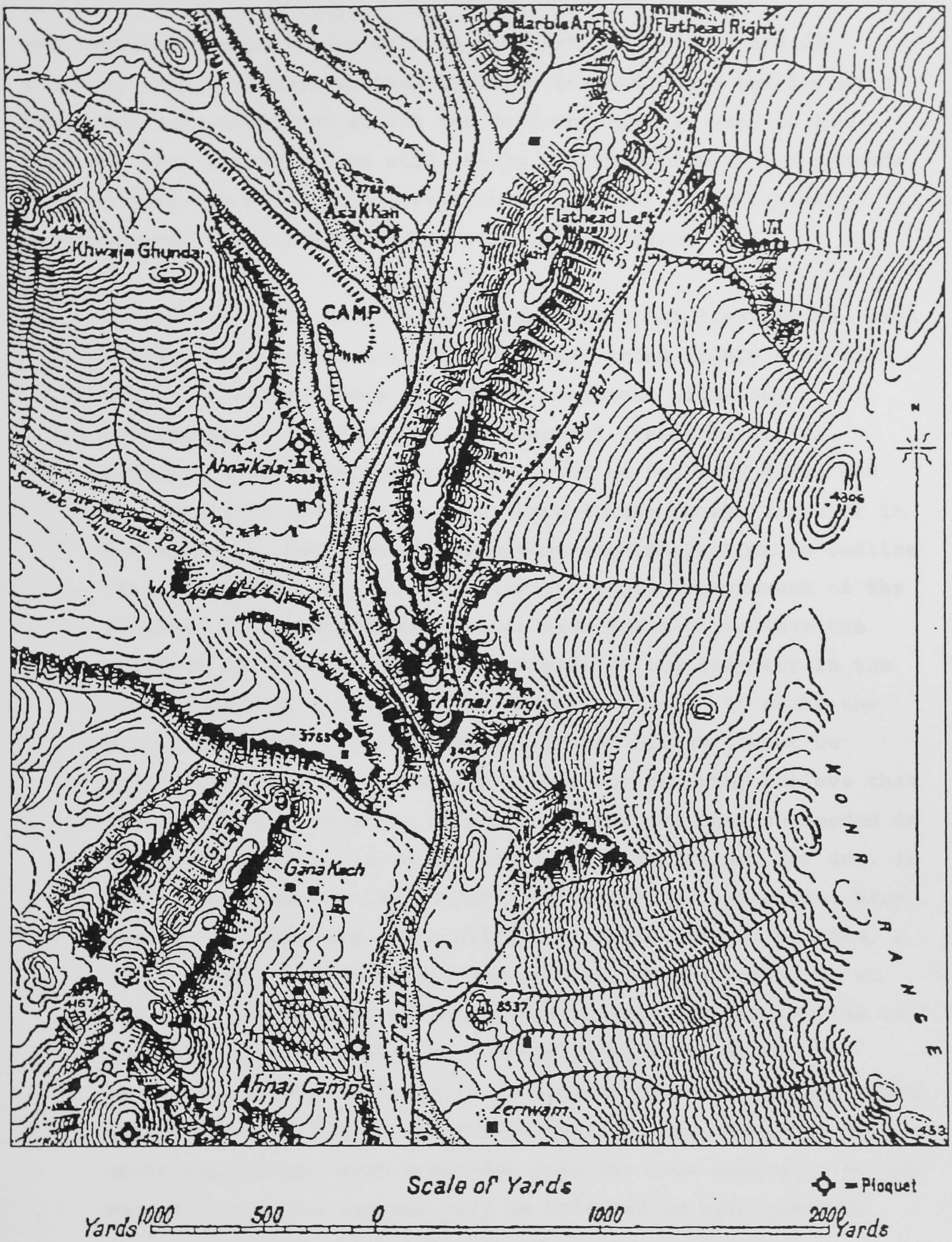

Figure 8. Map to illustrate operations in the area surrounding the Ahnai Tangi Gorge, January 1920.

and captured the positions with the loss of only 5 dead and 28 wounded, as the ill-disciplined opposing tribesmen had not occupied their defences overnight due to the cold weather. It was all too apparent that Indian troops still could not compete with the Mahsuds without full and close co-operation with aircraft and artillery. Major-General S.H. Climo noted on 13th January 1920:

> I doubt if it is understood how desperate the fighting has been during these operations. It would have tried highly even the pre-war Frontier Force or similar regiments with long experience of the Frontier and years of training. It is, perhaps, to be expected that those who do not know India and the frontier, and even some who have fought on the frontier in pre-war days, but lack the knowledge and imagination to realise what conditions have altered with the great improvement of the armament of the tribesmen, cannot understand or believe the standard of training that is required for the Infantry in the conditions that prevail on the Frontier to-day. To such, the belief is natural that the mere frontier tribes cannot be formidable opponents to modern troops nor can they believe that the standard of training or method of tactics that succeeded in the great war can, in former cases, be insufficient for and, in the latter case, be inapplicable to a Frontier campaign…. Here, however, matters are quite different. Masses cannot be used, a man's safety depends on his own efforts and abilities, or at the most, on those of a comparatively small body of men. He is operating over most difficult hills where a man who knows little or nothing of hills is at a great disadvantage and where ability to read ground and knowledge of how to use it is of great importance. Such knowledge does not come naturally to the men of the plains and can only be attained by long practice which many of the troops here have no opportunity of attaining.[66]

The attack on the Ahnai Tangi gorge on 14th January encountered strong resistance as Indian troops attempted to seize positions along

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[66] Waziristan Force Weekly Appreciation for week ending 13th January 1920, P.R.O. WO 106/56

the ridge flanking the Tank Zam Valley, leading to the heaviest fighting of the campaign. Intense rifle fire and concerted attacks by a large lashkar, which had anticipated the tactical importance of the position, greeted the 2/5th Gurkha Rifles as its men secured a permanent piquet on Flathead Left, while the main column was checked by accurate rifle fire from enemy positions at Marble Arch and Flathead Right, which made the capture of these positions imperative before the advance could continue. After their ammunition was exhausted, the Gurkhas repelled the Mahsud assaults at bayonet point, while reinforcements were rushed to their support. The strength of the Mahsud counterattacks made any advance further along the ridge impossible. As a result the hard pressed Indian troops consolidated their position at Flathead Left, while heavy rifle fire from Marble Arch forced the column to halt in a hastily constructed perimeter camp in the valley below at Asa Khan. Four determined attacks were made by Mahsud swordsmen under intense covering rifle fire against the Gurkhas at Flathead Left during the afternoon. Bayonets, stones, knives and grenades were employed to beat off the tribesmen, but at a heavy cost to the defending troops. The position was consolidated overnight, but its seizure and defence cost 17 officers and 365 other ranks dead or wounded, in the most stubbornly contested and decisive engagement of the entire campaign. Such losses were extremely serious in light of the dissipation of the column's strength in garrisoning permanent piquets, perimeter camps and escorting supply columns. However, bombing and strafing attacks carried out by Bristol Fighters, combined with the physical presence of several aircraft overhead which had exhausted their stores, prevented Mahsud attacks being pressed home to close quarters. Three aircraft were shot down, however, by rifle fire from the ground. A large number of dead men and abandoned rifles were left in front of the piquet when the lashkar finally withdrew, but the lashkar had nearly captured a position from where the main column could have been decimated by rifle fire.[67]

The Striking Force remained at Asa Khan for three days to evacuate casualties and await the arrival of reinforcements, while preparations were made to advance to Sorarogha. Air raids continued on Kaniguram, Makin and Sarwekai by D.H.9 and D.H.10 bombers, while

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[67] Despatch on Waziristan, pp.13-14 L/MIL/7/16930 and Waziristan 1919-20, pp.115-9

Bristol Fighters gave constant close support to the Derajat Column. On 18th January the force advanced five miles to the Sorarogha plateau where once again it halted to amass a reserve of supplies, ammunition and stores for the striking force. When the Inspector General of Infantry in Northern Command, Brigadier-General W.D. Villiers-Stuart, visited the column, Skeen noted that the only troops under his command on which he could rely were the 1/55th Rifles and Gurkha battalions; he once again requested experienced British officers and Gurkhas as reinforcements, with further aircraft, artillery, trench mortars and ammunition, as well as asking for permission to employ mustard gas.[68] The increasingly successful fighting indicated that the Indian troops were now capable of withstanding Mahsud attacks, but casualties were still heavy. However, writing on 20th January Major-General S.H. Climo observed:

> Some of my battalions are of little value in this fighting either from ignorance of hill warfare of both officers and men and of inability of some plains men to compete with these hills, or those from low fighting value and want of morale. The result is that the brunt of the fighting falls on very few battalions and the Lines of Communication becomes the location of doubtful units backed up by such good ones as can be spared from the fighting force. The arrival of three Gurkha battalions would enable me to free my Communications of the more doubtful elements, and to withdraw from the striking force three of the tired battalions who require a rest to refit and absorb reinforcements of both officers and men, at the same time giving much better security along the communication which are going to become more vulnerable as their length increases.[69]

The Derajat Column's confidence and tactical skill steadily improved as the continued fighting provided practical experience of hill warfare and its men learnt basic infantry skills under active service conditions. Between 29th December and 20th January it fought over twenty major engagements involving the commitment of more than a brigade. Night operations were employed to seize piquets, jumping-off

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[68] Maxwell, op cit, pp.241-3

[69] Waziristan Force Weekly Appreciation for week ending 20th January 1920, P.R.O. WO 106/56

areas and important defensive positions during five of the larger operations. These avoided heavy casualties, extended operations outside daylight hours and often forestalled the tribesmen occupying and defending strong positions and thereby using their rifles to full effect. The column made steady progress during January as its strength was steadily augmented by further Gurkha battalions, accustomed to fighting in mountainous terrain allowing three further units to be replaced.[70]

The Derajat Column began preparations while at Sorarogha for an attack on the Barari Tangi gorge, held in strength by a Mahsud lashkar. An air strip built within the perimeter camp enabled Bristol Fighters to closely support troops busily engaged in constructing tracks or building permanent piquets on the surrounding high ground, without having to return to bases within the settled areas to refuel and re-arm (See Figure 9).[71] On 28th January the Barari Tangi gorge was captured when a night advance secured positions on the heights at Barari Centre, the Barrier and Gibraltar, from the surprised tribesmen who offered little effective resistance. A large lashkar assembled once again on 29th January emboldened by the presence of an Afghan officer and two 9lb mountain guns. At Shin Konr on 29th January the mountain guns opened fire, while imperial troops constructed piquets north of the gorge, but they were rapidly suppressed by British artillery. A lashkar spotted ahead of the column declined to give battle, although it was successfully engaged by artillery and aircraft and forced to disperse. The sudden British advance, heavy casualties earlier in the campaign and the inability of the Afghans to render effective support effectively shattered tribal morale. In comparison, the confidence of the column and its commander increased as it became evident that organised tribal resistance had ceased when the main lashkars dispersed into the hills.[72] During February the Striking Force only encountered sporadic resistance from tribesmen inhabiting the immediate area, with fighting confined to sniping, raids and attacks on rearguards.[73] As a result it was able to complete the further planned stages of the

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[70] Despatch on Waziristan, p.14 L/MIL/7/16930

[71] Viceroy, Army Department, to SSI, 9th Feb. 1920, L/MIL/3/2512

[72] Despatch on Waziristan, p.15 L/MIL/7/16930 and Waziristan Force Weekly Appreciation for week ending 3rd February 1920, L/MIL/17/5/4119

[73] Waziristan Force Weekly Appreciation for weeks ending 3rd and 10th February 1920, P.R.O. WO 106/56

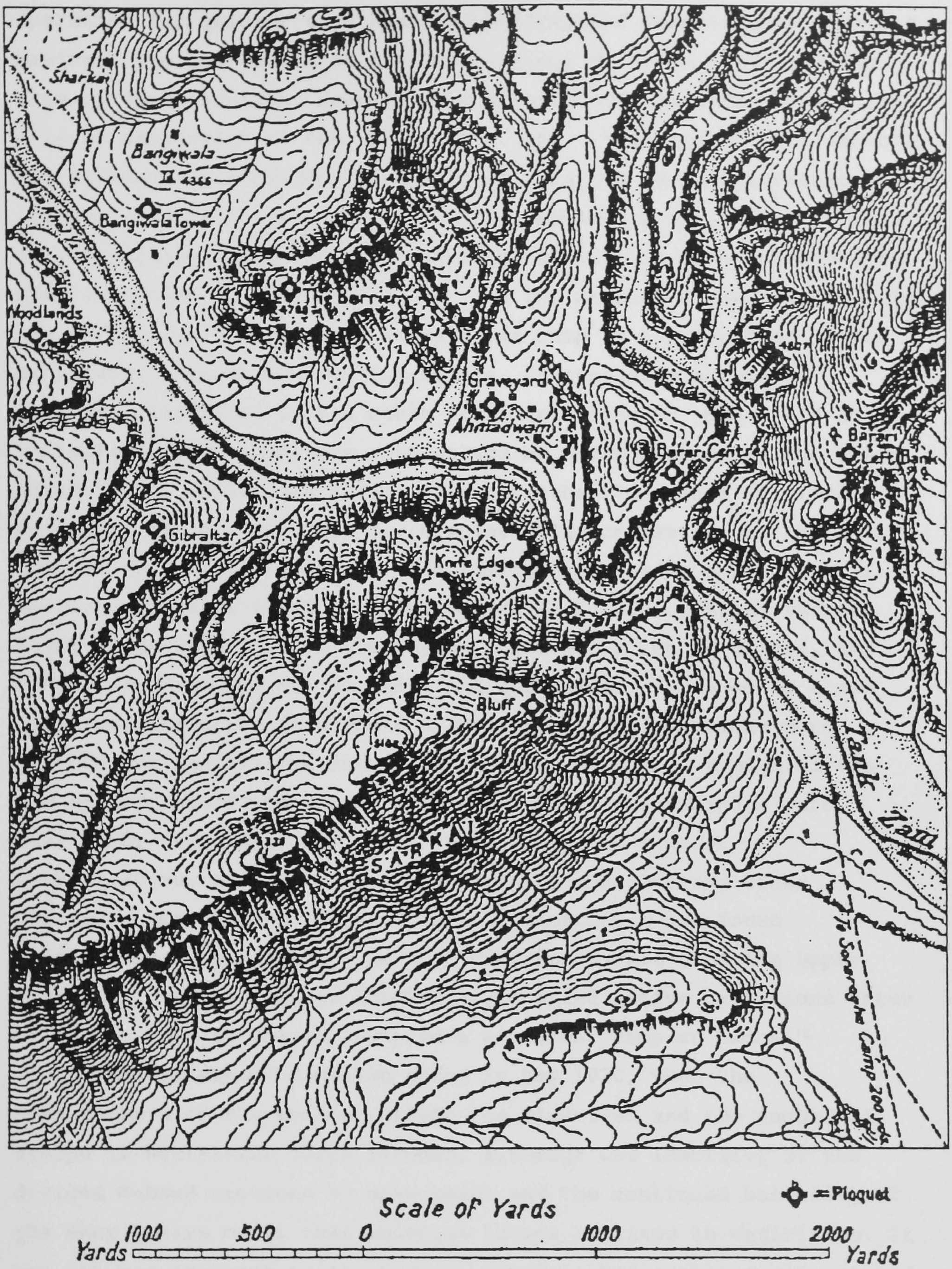

Figure 9. Map to illustrate operations in the area surrounding the Barari Tangi Gorge, January 1920

operation far quicker than had been anticipated despite deteriorating weather. The protection of the increasingly vulnerable lengthening line of communication, however, was a particular concern and absorbed a large proportion of the available troops. Interference with convoys was fortunately considerably less than expected due to permanent piquets, and as the Mahsuds still concentrated on attacking the head of the column. During February punitive operations were conducted for the first time in an endeavour to make the Mahsuds agree terms. While the Derajat Column occupied Tauda China camp in the heart of Mahsud territory, between 19th-28th February, it conducted extensive punitive operations in the Makin area destroying 51 towers and 450 buildings. Many casualties were caused by heavy sniping as the steep scrub-covered hills and gorges around Piazha Algad made it difficult to locate hidden riflemen. The complete disorganisation of the enemy, however, was made apparent by the limited opposition encountered in terrain otherwise ideally suited to tribal tactics.[74] After various booby traps were left to discourage the desecration of graves, the Makin was evacuated on 1st March and the column proceeded to a new camp near Kaniguram from where further punitive operations were carried out against the remaining hostile sections.[75] A sign of the new efficiency of the troops was demonstrated when snipers were stalked by individual riflemen. Raids along the line of communication, moreover, were countered by ambushes and other offensive measures by Indian troops, indicating a new found confidence and proficiency in hill warfare. A raid into the Upper Baddar Toi valley between 6th-8th April ended active operations after which the Derajat Column occupied a permanent camp at Ladha.[76]

The Waziristan Campaign ended in May 1920, when the headquarters of the Derajat Column was dissolved and the number of troops in Waziristan Force reduced, although the inability of the divided Mahsud sections to make peace and the continued hostility of the Wana Wazirs meant that imperial troops remained in Waziristan. It was all too apparent to the General Staff in India that a new era had begun in frontier warfare against the trans-border tribes. A total of

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[74] Waziristan Force Weekly Appreciation for week ending 24th February 1920, P.R.O. WO 106/56

[75] Waziristan Force Weekly Appreciation for week ending 9th March 1920, P.R.O. WO 106/56 and F.T. Stockdale, Walk Warily in Waziristan, (London, 1982), p.42.

[76] Waziristan Force Weekly Appreciation for week ending 31st March 1920, P.R.O. WO 106/56

366 dead, 1683 wounded and 237 missing had been suffered by Waziristan Force in fighting of unparalleled severity, which represented the highest "butchers bill" ever suffered during operations against the trans-border Pathan tribes.[77] Tribal lashkars had fought with courage, determination and skill never encountered before by imperial troops. As a direct result of the dramatic improvements in tribal tactics, their possession of large quantities of .303 rifles and the presence of a significant number of ex-servicemen in lashkars, the Indian Army had nearly been defeated. The low level of basic individual infantry training and a lack of knowledge and experience of the principles and minor tactics of mountain warfare amongst imperial troops had been the most alarming feature of the fighting, and was responsible for the heavy losses at Mahsud hands. During the campaign the learning curve had proved both steep and costly in lives as the tribesmen exploited the long list of mistakes committed by British officers and Indian troops. Although by March 1920 the units in the Derajat Column had successfully learnt the tactics of mountain warfare, the majority of the Army in India still lacked both training and experience. General Sir Charles Monro, the Commander-in-Chief in India, concluded the official report on the operations:

> [The operations] have merely borne out the principles of mountain warfare, which are well known from many former campaigns. It is, however, necessary here to lay emphasis upon the supreme importance of adequate training of troops prior to their employment in a mountain campaign. Nothing can take the place of careful individual training. If possible, it is more essential in mountain warfare then in any other class of fighting that troops should have confidence in their weapons. This can only be obtained by systematic individual training, which must include instruction in making the best tactical use of ground, in the principles of fire and movement, and the mental development of the soldier to such a degree of alertness, that no target escapes from detection and appropriate action is immediately taken. At the beginning of these operations, a proportion of the troops were not fully

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[77] Jacob, op cit, p.227

> masters of their weapons. This was due to ignorance of how to use them to the best advantage, as, owing to the demands made by the Great War, men had been somewhat hastily trained, and it is probable the severity of fighting in December was due, to a certain degree to this lack of training.[78]

The fighting in Waziristan also led to the first widespread use of permanent piquets and night operations to counteract improvements in tribal military effectiveness, although there use had been discussed by officers in India before the campaign. They had proved highly successful and indicated that if heavy tribal resistance was encountered they would have to be employed again. Additionally, Imperial troops were now reliant on supporting arms, services and equipment which exacerbated the transport and supply problems always inherent in frontier warfare. Despite the use of modern military equipment by the Derajat Column, it had been made all too abundantly clear that the post-war Army in India needed, once again, first and foremost train its men and organise to deal with two distinct forms of warfare: that against a conventionally organised, trained and equipped opponent and that against a well-armed tribal adversary in the hills of independent territory.

The Third Afghan War ended with large numbers of imperial troops concentrated in the N.W.F.P. in close contact with the trans-border Pathan troops and led to a major re-deployment of the Army in India as well as a re-evaluation of frontier policy.[79] Intermittent fighting continued under operational conditions very different from that during 1919-20 in Waziristan, with three brigades tied down guarding the line of communication of a striking force based at Ladha. In March 1920 Lord Chelmsford, the Viceroy, agreed with the General Staff that the occupation of central Waziristan offered the best means of pacifying the area and protecting the administrative border and sanctioned the construction of roads suitable for motor transport from the Derajat to the perimeter camps occupied by the forward troops.[80] In June 1920 those units stationed in the N.W.F.P. and Baluchistan, comprising 12 Infantry brigades, were redesignated

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[78] Despatch on Waziristan, pp.18-19 L/MIL/7/16930

[79] M. Jacobson, The Modernisation of he Indian Army, 1925-39, (University of California Ph.D., 1979), p.120

[80] Viceroy, Foreign and Political Dept. to SSI, 23rd March 1920, L/MIL/7/15939

the Covering Troops while the rest of the army was divided between a Field Army, organised, trained and equipped primarily for operations in Afghanistan, and Internal Security troops intended to maintain order in India. A total of 43 Indian infantry battalions, three pioneer battalions, six Indian cavalry regiments, four field and 12 1/2 pack artillery batteries, as well as two 1/2 companies of armoured cars were distributed between Peshawar, Kohat and the Derajat as well as in Waziristan. Although trained and equipped identically with the rest of the Army in India, these units had a lower scale of transport, signals and wheeled artillery and were maintained on a permanent war footing ready to take the field immediately in event of a tribal rising. The number of British units - five infantry battalions - was kept at a minimum, however, as the climate was regarded as inimical to their health and as Indian troops were thought to be better adapted to tribal warfare.[81] It was clear, however, that the standard of training of these men was far below pre-war standards and that dramatic remedial action was required to restore their efficiency in mountain warfare.

The Waziristan Campaign and the continued unsettled state of tribal territory prompted the General Staff in India to take immediate steps, while the fighting was underway, to provide appropriate training for units in the N.W.F.P.. Northern Command hurriedly reopened the Mountain Warfare School at Abbottabad on 1st February 1920 to provide sufficient trained instructors for the post-war Army in India. Colonel W.D. Villiers Stuart, assisted by four experienced officers, an attached infantry battalion, mountain artillery battery and a cavalry squadron as demonstration troops, once again assumed command.[82] A series of courses were held during the spring, summer and autumn to train British officers without previous knowledge of mountain warfare, refresh the minds of those with limited experience and finally to provide notes, précis and examples of training schemes and demonstrations that could be used to teach their own units in an endeavour to impart a common doctrine

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[81] Army Department Despatch No. 2 (Special): The size, composition and organisation of the military forces in India, L/MIL/7/13315 and Review of important military events in India No. 1 of 1920, 28th June 1920, L/MIL/7/12491

[82] To General Officer Commanding Northern Command, 18th Jan. 1920, 29th Jan. 1920, and To Chief of the General Staff in India, 23rd Feb. 1920. P/10875

throughout the Army in India.[83] The curriculum followed the practical and realistic system of instruction used before, beginning with an explanation of the basic principles of war - in a deliberate attempt to prevent the subject becoming too specialised - before introducing the modifications required in their application to 'trans-border' warfare. As it was assumed that the comparatively well-trained students now at Abbottabad already possessed a detailed knowledge of the normal principles of war a far greater proportion of the curriculum was devoted to the principles and minor tactics of hill warfare. Widespread use was made of examples from prior frontier campaigns to demonstrate principles and various points made during lectures, which were illustrated using sand table models and demonstration troops. The Directing Staff pointed out to its students that it was impossible to employ all modern weapons because of the terrain. Accordingly it stressed the importance of individual skills in mountain warfare - skill-at-arms, self-reliance, vigilance and personal judgement - to overcome 'trans-border loneliness', that resulted from using small widely dispersed detachments in tribal territory. The Directing Staff urged imperial troops to develop a 'spirit of suspicion' to defeat a tribal enemy at his own game. In an endeavour to prevent 'regrettable incidents', students were introduced to the different types of ambushes that had been employed by the Pathans in the past and the correct means of countering them. The syllabus covered: piqueting, examples of drill preparations, camp and bivouac routine, effective covering fire, sangars, cavalry, mountain artillery, notes on destroying a village, the use of Lewis and Vickers machine guns in trans-border warfare, how to study a hill campaign, transport and supply, common mistakes in the field and lessons derived from recent fighting. The importance of study and learning from prior experience on the frontier was stressed both by Villiers-Stuart and his instructors. Particular attention was directed towards the modifications in tactics and the employment of modern equipment in hill warfare during the recent operations in Waziristan. Such guidance was particularly important given confusion

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[83] Staffs in India, Etc., 1st Jan. 1920, p.54 Foulkes Mss, L.H.C.M.A. 6/111, To General Officer Commanding Northern Command, 24th Jan. 1920, P/10875, Graham, op cit, p.202 and Maxwell, op cit, p.254-6

regarding the use of new weapons in tribal territory.[84] The Mountain Warfare School was highly popular with its students and was able to effect important changes in imperial tactics.[85] Villiers-Stuart later observed:

> We were able to revolutionise the methods of building sangars; show how very effective smoke candles can be when carried by riflemen and used sensibly; we taught a really sound method of attacking and destroying villages and retiring from them; the use of ambuscades; and a thousand matters of attack, defence, camp procedure, removal of wounded and much more which, though vaguely known and practised in the old Piffer regiments had never been codified as standard practice.[86]

Despite its obvious success, the school was not retained by the Army in India as a permanent training establishment, as the principle was re-established that units would carry out training under the direction of the staff of the formations to which they belonged.[87]

The General Staff was well aware that it would be some time, however, before the level of basic individual military skills and proficiency of units had been restored to pre-war standards. The provision of an up-to-date training manual for units serving throughout India again became a concern to many officers. Indeed, after the Mountain Warfare School closed it was seen as essential. However, the provisional post-war edition of F.S.R. published in 1920 still referred to 'savage warfare' solely in terms of fighting against opponents reliant on shock tactics, and lacked the detail that the many inexperienced officers and N.C.O.s of the post-war army required.[88] Fighting in Waziristan demonstrated that this was no longer the case. Indeed, there was a contradiction in the declaration in F.S.R. that the principles of war applied without any reservations

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[84] Mountain Warfare School. Abbottabad, Synopsis of Lectures 1920 (Revised 1921), (Rawalpindi, 1921) and Capt. A.D. Simmons,'Notes on Mountain Warfare Course at Abbottabad 1920, 19th July 1920, Symons Mss, D.M.M. 62/1687/297

[85] Barge to Montgomery, 26th April 1920, Montgomery-Massingberd Mss, L.H.C.M.A. 115 and Lt.-Col. F.S. Keen,'Under K.R. 106 Commanding Officers are responsible for the systematic and efficient instruction of officers under their command in all professional duties...', J.U.S.I.I., 50, 222, (1921), p.6

[86] Maxwell, op cit, p.259

[87] Army Department Despatch No. 101 of 1920: Policy to be adopted in future in connection with the military training establishments of the Army in India, 25th Nov. 1920, L/MIL/7/7223

[88] Field Service Regulations Vol. II Operations (Provisional), (London, 1920), pp.261-89

to all forms of warfare, but that important modifications were required in their application during operations in tribal territory. A small pamphlet was prepared during 1920 to complement F.S.R. pending the publication of a larger volume on mountain warfare. The Commandant of the Staff College at Quetta, however, vigorously opposed its circulation, believing it was both misleading and dangerous. Major-General L. Vaughan complained that it failed to go deeply into the subject and feared it would reduce mountain warfare to a set of locally applied specialised rules that would cause officers to forget that the wider principles of war underlay all military operations. Particular criticism was reserved for the Standing Orders it included which he thought officers would accept as 'gospel' rather than just as an example.[89] A revised edition was published by the General Staff, and 15,000 copies were issued during January 1921 to units of the Army in India which laid down general principles to govern the conduct of 'uncivilized' warfare as well as general principles of mountain warfare against the trans-border Pathan tribes for all three arms of service. It outlined the normal minor tactics of mountain warfare - piqueting, protection on the march, protection of the lines of communication, camps and bivouacs and night operations and moreover, provided guidance regarding the use of new equipment such as Lewis guns. Two lengthy appendices listed the duties of permanent piquet commanders as well as suggesting standing orders for use in a frontier campaign.[90] Training was also facilitated by several unofficial manuals written by experienced Indian Army officers.[91] Additionally, the headquarters of Wazirforce produced its own tactical notes, compiled from the memoranda it had issued periodically since it was formed, which were distributed to units serving in the area and contained guidance for all three arms of service.[92]

The conduct of frontier warfare also covered at other training establishments. The Royal Military College at Sandhurst, responsible for training officers for both the British and Indian armies, covered the topic as experienced junior British officers were in such short supply throughout the Army in India. A small manual was printed for

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[89] Vaughan to Montgomery, 28th July 1920, Montgomery-Massingberd Mss, L.H.C.M.A. 116

[90] Notes on Mountain Warfare, (Calcutta, 1920)

[91] "Frontier", Frontier Warfare, (Bombay, 1921) and S.H.C., Mountain Warfare Notes, (Poona, 1921)

[92] Wazirforce Tactical Notes, (Dera Ismail Khan, 1921)

use at the college to facilitate instruction including extracts from the official history of the Waziristan campaign and *Small Wars*, and listed various lessons derived from the Tirah campaign.[93] When the Staff College at Quetta reopened after the First World War, frontier warfare once again featured in its curriculum.[94] In 1922 its syllabus included seven lectures, indoor exercises and student conferences devoted to the conduct of military operations on the North-West Frontier and the political problem posed by the tribes. The lessons learnt during the fighting in Waziristan formed the subject of three detailed lectures which discussed the operations of the Derajat Column in depth.[95] Additionally, frontier warfare also formed part of the curriculum of the Staff College at Camberley where training followed similar lines to those before the First World War, although visiting lecturers provided further information regarding the military and political problems associated with the frontier.[96]

The N.W.F.P. remained unsettled during the early 1920s, with a series of minor operations against tribal raiders in Peshawar and Kohat Districts. Units stationed in these areas were able to carry out training in mountain warfare without serious interference in accordance with instructions issued by local headquarters.[97] During 1920 fighting still continued in Waziristan against the Mahsuds and Wazirs. As one junior officer observed: 'On every village green in England monuments were rising which proclaimed the war was over, yet here I had only to raise my eyes to see once more the piled sandbags. the rough stone parapet, and writhing strands of barbed wire.'[98] A continued shortage of trained and experienced officers and men handicapped operations in Waziristan. For example, when the 3/151st Punjabis arrived in the Tochi Valley from Palestine in 1920, it consisted almost entirely of young officers and soldiers unacquainted with either the frontier or mountain warfare, with the exception of two pre-war regular officers on whom it relied to pass on their

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[93] Notes on Frontier Warfare, (Aldershot, 1922)

[94] Vaughan to Montgomery, 28th July 1920, Montgomery-Massingberd Mss, L.H.C.M.A. 116

[95] See Staff College Quetta 1922, North-West Frontier Warfare. Ismay Mss L.H.C.M.A. III/2/14-27

[96] Anderson to Montgomery, 19th July 1921, Montgomery-Massingberd Mss, L.H.C.M.A. 128

[97] See Training Instructions. Mountain Warfare. Peshawar District, (Peshawar, 1920)

[98] Field Marshal Sir W. Slim, Unofficial History, (London, 1959), p.101

experience.[99] The G.O.C. Waziristan Force was unwilling to relinquish the combat-seasoned troops under his command as the available reinforcements were only fit for protecting the lines of communication. In March 1920 Major-General S.H. Climo observed: 'My present Units have learnt their work by practical experience and are good and self-confident, and I am willing to undertake operations with them that I would never think of contemplating with Units who have not had the experience.'[100] British battalions were especially handicapped by their lack of any experienced officers or men. For example, when the 2nd Battalion Queen's Royal Regiment arrived in October 1920, an experienced officer had to be attached from the 2/33rd Gurkha Rifles to supervise training.[101]

The intermittent fighting in Waziristan provided further lessons with regard to frontier warfare, but under conditions very different from that encountered during the advance up the Tank Zam Valley as the remaining hostile sections resorted to guerrilla warfare. The protection of the advanced perimeter camps and permanent piquets, dotted along the lines of communication from Ladha, in the Tochi Valley and from Wana (which had been occupied in the winter of 1919-20), required Indian troops to maintain a high standard of vigilance. Active small scale operations continued during which casualties were suffered at the hands of hostile tribesmen waiting to take advantage of any relaxation of military precautions. Throughout the spring of 1921 heavy raids occurred daily along the lines of communication, making the protection of convoys more difficult. As a result permanent piquets had to be strengthened, the surrounding area searched for hostile tribesmen and extra piquets established before convoys with strong escorts passed though each sector.[102] In July 1921 A.H.Q. noted:

> There are now operating in the three areas troops which approximately amount to seven infantry brigades. They are engaged in fighting a bold, well armed, and cunning enemy in an inhospitable and mountainous country. The heat is intense and conditions are very hard; the strain on officers and men is

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[99] Brig. R.C. Bristow, Memories of the British Raj. A Soldier in India, (London, 1974), p.49
[100] G.O.C. Waziristan Force to C.G.S., 10th March 1920, L/P&S/10/870
[101] Col. H.C. Wylly, History of the Queen's Royal Regiment, (Aldershot, 1925), pp.129-30
[102] Matheson to Montgomery, 29th April 1921, Matheson Mss

> great, but they are rising to the occasion and a satisfactory standard of efficiency is being maintained. The Waziristan operations are nothing more or less than a frontier war on a large scale.[103]

It was difficult to prevent British and Indian troops, deployed on monotonous road protection duties, from falling into stereotyped, predictable routines and neglecting military precautions after long periods of time without contact with hostile tribesmen. New methods were developed and implemented on each section of the lines of communication to provide security from raids. 'Floating platoons', post-movable columns and larger escorts with convoys provided additional security from tribal raids.[104] The strain on senior officers was a constant source of concern. Major-General Sir Torquil Matheson observed on 27th March 1921: 'The conditions are far harder in a place like Ladha for example than on the Western Front… you are in confined place and you ever have to be on the alert.'[105] Similar views were echoed by more junior officers. E.W. Langlands observed: 'I soon came to the conclusion that commanding a Company in Waziristan was far more difficult than commanding a Battalion in France.'[106] It proved difficult to establish a system of methodical and progressive training for the garrison, whose battalions were constantly engaged on road and camp protection duties.[107] As the standard of training slowly improved greater emphasis was placed on offensive tactics, with patrols actively seeking out hostile tribesmen in the nearby hills. However, the closely intermingled 'hostile' and 'peaceful' tribal population meant that Indian troops had to exercise considerable restraint and work in close co-operation with the local political administration. Tribesmen intent on attacking imperial troops frequently hid their arms and melted back into the local population to avoid retribution. As a result a series of unfortunate incidents occurred. Major-General T.G. Matheson, the G.O.C. Wazirforce noted in May 1921:

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[103] Precis of important military events in India from 1st March 1920 to 28th June 1921, 18th July 1921, P.R.O. WO 106/157
[104] Col. G.M. Orr,'South Waziristan in 1921', A.Q. 5, 2, (1922), pp.290-2
[105] Matheson to Montgomery, 27th March 1921, Matheson Mss
[106] E.W. Langlands, 'Waziristan, 1920-21', in MacFetridge and Warren, op cit, p.109
[107] Orr, op cit, p.296

> The result is that from the soldiers' point of view, we are still at war with the Mahsuds, and everywhere we go we are in danger of having a bullet put through us… it is difficult to differentiate between the two classes i.e. the hostile and the friendly… The blood of the troops is up and their lives in danger, and it requires a very high standard of discipline to ignore the friendly on such occasions. On many occasions they are not ignored.[108]

The payment of blood money in accordance with local customs placated tribal sensibilities when 'friendlies' were killed by troops, but such incidents were a growing source of friction between soldiers and political officers. The arrival of untrained junior British officers and drafts without appropriate training or skills remained a problem to imperial regiments. When the 29th Punjabis joined Wazirforce in January 1921, for example, its ranks had been stripped of trained and experienced troops when it demobilised and its remaining men had only carried out individual, section and platoon training since the war.[109] Similar problems were encountered by other formations in the N.W.F.P.. The Commandant of the 4th Indian Brigade at Nowshera complained to the D.C.G.S. in March 1921: 'I wish my new battns knew frontier warfare - we have to start 'au fond'. At least they have nothing to unlearn.'[110]

The General Staff in India discussed the resuscitation of the P.F.F. on several occasions during the early 1920s after the cost and inherent difficulties posed by conducting military operations in tribal territory under modern conditions were made apparent. A committee that met in May 1921 to discuss Indian military requirements, observed that frontier warfare was a specialised form of fighting, and advocated a reversion to specialised troops permanently stationed on the frontier as a means of reducing the strength of the Covering Troops. The resuscitation of a new frontier force, composed of 14-15 battalions of Gurkhas, Dogras and Pathans drawn from the 12th and 13th regimental groups, remained under discussion until the end of 1923, but the inherent problems involved

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[108] Matheson to Montgomery, 26th May 1921, Matheson Mss

[109] Lt.-Col. P.S. Stoney, A History of the 26th Punjabis 1857-1923, (Aldershot, 1924), pp.79-81

[110] O'Dowda to Montgomery, 11th March 1921, Montgomery-Massingberd Mss, L.H.C.M.A. 123

in maintaining a separate specialist force meant that line regiments of the Indian Army continued to serve period tours of duty in the border cantonments.[111]

The lessons learnt regarding the capabilities and limitations of modern weapons were carefully evaluated in India following the Third Afghan War. Aircraft, gas, armoured cars and tanks appeared to many British officers to offer the means of reducing the frequency and duration of punitive expeditions, minimising casualties, increasing mobility and providing a means of reducing manpower deployed on the frontier. Such interest was fostered by the views of proponents of new equipment who believed their employment would revolutionise not only European warfare, but also operations carried out throughout the British Empire. Moreover, it appeared that the use of such equipment against a 'savage' opponent was particularly justified following the 1919-20 operations, to counterbalance improving tribal armament and military effectiveness, and until the Indian Army regained its pre-war efficiency.[112] The Army Department, however, noted in June 1920: 'The only limiting factor we should accept in this respect is that of mobility, and we consider that our forces should be armed and equipped with all modern appliances to the highest degree compatible with mobility.'[113]

The armament of imperial infantry battalions had dramatically increased during the First World War, although the rifle remained the most effective weapon in tribal territory. Hand and rifle grenades enabled soldiers to defend the immediate vicinity of piquets without being exposed to enemy rifle fire, and to clear dead ground. During the latter stages of the operations around Makin, rifle grenades proved particularly effective in clearing broken wooded terrain used as cover by snipers.[114] Automatic weapons appeared the best means to counter improved tribal armament and tactics. The number of automatic weapons in each battalion had been dramatically increased by the provision of Lewis guns, but opinion was divided regarding their

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[111] Montgomery to Marshall, 12th Aug. 1921, Montgomery-Massingberd Mss, L.H.C.M.A. 128, Proceedings of the Military Requirements Committee 1921. Report. (Lord Rawlinson's Committee), (Simla, 1921), p.6 L/MIL/17/5/1773/1 and Rawlinson to Montgomery, 6th Dec. 1922, Montgomery-Massingberd Mss, L.H.C.M.A.

[112] The Army in India and its Evolution, (Calcutta, 1924), p.38 and p.43

[113] Army Department Despatch No. 2 (Special) of 1920: The size, composition and organization of the military forces in India, 24th June 1920, L/MIL/3/1118

[114] Maj.-Gen. S.H. Climo, Commanding Waziristan Force, to C.G.S., 19th April 1920, L/MIL/7/18853

tactical employment on the frontier and whether they should be a platoon, company or battalion weapon.[115] The number of weapons in each infantry battalions serving in India was finally fixed at only 16 Lewis guns, one per platoon, to maintain rifle strength and due to difficulties in providing adequate ammunition during operations in tribal territory. The weight of a Lewis gun (28lbs per gun and a 3lb bipod), however, was such that a mule was needed to carry the weapon, ammunition and equipment in each platoon, which was often unable to keep up with the infantry and acted as a drag on mobility in the hills.[116] Vickers machine guns were added to the establishment of each infantry unit following the disbandment of the Machine Gun Corps in 1921.[117] The long range, accuracy and high sustained rate of fire of Vickers heavy machine guns provided the infantry with its own echelon of supporting fire between their small arms and mountain artillery. These were utilised to protect the placement of piquets, support attacks and withdrawals and to defend perimeter camps and outlying defences. Their greatest drawback was the additional pack transport to carry the weapons, equipment and ammunition, considerably increasing the length of columns on the march. Moreover, their comparatively slow speed coming in and out of action limited mobility, and it was difficult to direct their fire in broken terrain. Despite these limitations they provided a valuable addition to the weapons at the disposal of infantry commanders.[118]

The mountain artillery once again demonstrated its effectiveness during both the Third Afghan War and in Waziristan. Several important lessons were evident both with regard to training and equipment. When opposed to tribesmen armed with rifles close co-operation between the infantry and gunners proved essential, although the increased range of modern mountain ordnance meant batteries no longer had to operate in such close proximity to the forward troops. A lack of a reliable means of communication between the infantry and batteries to direct artillery fire indicated, however, that a simple

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[115] See Maj. J.G. Lecky,'Notes on the Tactical Use of Lewis Guns in Mountain Warfare', J.U.S.I.I., 49, 219, (1920), pp.170-188a and Ishmael,'Tactical use of Lewis Guns (A Criticism)', J.U.S.I.I., 50, 223, (1922), pp.260-9

[116] The Army in India and its Evolution, (Calcutta, 1924), p.44

[117] Army Department Despatch No. 12 of 1921: Proposed organization and establishments of the fighting units of the post-war Army in India, 3rd Feb. 1921, L/MIL/7/13315

[118] Capt. H.J. Davis,'The Employment of Machine Guns with a Battalion of Infantry: With Special Reference to the Indian Frontier', J.R.U.S.I., 67, 468, (1922), pp.688-96

and universal system as well as special training was needed to ensure effective co-operation between the two arms.[119] The 3.7" Q.F. pack howitzer represented a distinct qualitative improvement over 10lb and 2.75" pack guns currently in service, with a range of 5,900 yards, an all-round traverse and high trajectory that enabled them to fire from positions on the valley floor. It was able to search dead ground and clear sangars, nullahs and positions out of the direct line of sight of Indian troops with accurate, rapid indirect shell fire. A lack of a shrapnel round limited the 3.7" howitzers effectiveness, but its heavier high explosive shell was capable of in dislodging tribesmen from behind cover and killing those caught in the open. The howitzer, also had the disadvantage that it was difficult to range accurately, was unable to land shells on ridges except by chance, it took longer to come into action and additional mules were required to carry the weapon and its heavy ammunition. The relative tactical value of guns and howitzers in mountain warfare remained a subject of debate amongst gunners in India, although it was generally accepted that both types of ordnance needed to co-operate together to obtain the results .[120] Despite the fact that in many respects the role of the 2.75" gun had been supplanted by the Vickers machine gun, a replacement gun was considered in 1922 to complement the characteristics of the 3.7" howitzer and to engage targets not visible to the forward infantry.[121]

The terrain and problems of transport and supply restricted the employment of heavier calibre artillery in tribal territory, apart from areas where roads existed or where the valleys were negotiable by draught animals. A section of 6" guns, capable of firing a 100lb shell over 10,000 yards, was manhandled to Ladha in June and shelled Makin at intervals until September 1921, destroying buildings and preventing crops from being harvested. Although the presence of the 6" guns and the threat of heavy bombardment proved effective in

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[119] Capt. J.A Deane,'Notes on the Co-operation of Artillery and Infantry in Mountain Warfare', J.R.A., 46, 11, (1919-20), pp.510-13 and Maj. and Bvt Lt.-Col. A.F.V. Jarrett,'Co-operation in Mountain Warfare', J.R.A., 47, 3, (1920-21), pp.21-2

[120] Despatch on Waziristan, p.18, Reports by the Inspector General of Communications and Directors of Services Waziristan Force. 1919-20, (Simla, 1920), p.19 and Maj. and Lt.-Col. A.J. Farfan,'Mountain Artillery in Waziristan 1919-20', J.U.S.I.I., 50, 222, (1921), pp.187-97

[121] Army Department Despatch No. 8 of 1922: Improvement in the existing pattern pack artillery gun equipment, 23rd March 1922 and Proceedings of Pack Artillery Committee assembled at Jutogh, on the 15th August 1921, 24th Aug. 1921, L/MIL/7/1574

controlling a large area of central Waziristan, no other heavy artillery was deployed because of transport and supply difficulties apart from static 15lb and four 4.5" post-defence guns scattered in forts throughout the area.[122]

The proposals presented during the autumn of 1919 that poison gas could be successfully employed in India were widely supported by British officers acquainted with recent changes in the conduct of frontier warfare. However, despite frequent requests by the commander of Wazirforce that gas be employed, gas shells were unavailable in India. Brigadier W.S. Leslie summed up the view of officers serving with the Derajat Column on 10th January 1920: 'Gas is the best means of reducing the casualty list (on our side) & here we are all strongly in favour of it.'[123] The difficulties encountered during the fighting in Waziristan added weight to Major-General C.H. Foulkes' views regarding the efficacy of chemical weapons, and during several lectures given to senior civil and military officials at Dehli, he stressed that gas would help redress many of the disadvantages that imperial troops worked under when operating in tribal territory with regard to transport, supply and the size of the force that could be deployed.[124] After close consultation between the Commander-in-Chief, the General Staff in India and the political authorities, the Government of India decided in February 1920, that no distinction should be made between the use of gas and other modern equipment.[125] The reluctance of the Secretary of State to sanction its employment on moral and political grounds, however, meant a decision was deferred until the wider implications of its use had been fully discussed in London; although pending a decision, reserves of gas-filled shells and aircraft bombs were stockpiled and research was conducted regarding gas warfare in India.[126] It was finally decided by the Government of India in July 1922 that gas should only be employed

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[122] Precis of important military events in India from 1st March 1920 to 28th June 1921, 18th July 1921, p.2 P.R.O. WO 106/157, Despatch by H.E. General Lord Rawlinson of Trent, C-in-C in India, on the operations of the Waziristan Force for the period 1st April 1921 to 31st December 1921, (Dehli, 1921), p.3 L/MIL/17/13/122 and Graham, op cit, p.218 and p.221

[123] Leslie to Foulkes, 10th Jan. 1921, Foulkes Mss., L.H.C.M.A. 6/106

[124] Lecture at Dehli to the Viceroy, C-in-C and Members of the Supreme Council and Lecture at Dehli on 22.1.20 to Army H.Q. Officers, Foulkes Mss, L.H.C.M.A. 6/106

[125] Viceroy, Army Dept. to SSI, 6th Feb. 1920 and Army Department Despatch No. 12 of 1920: The use of gas in Warfare, 12th Feb. 1920, L/MIL/7/19238

[126] Memorandum Circulated by the Secretary of State for India, 12th May 1920, L/MIL/7/19238

by the Army in India in retaliation for an attack on imperial troops.[127]

The use of motor transport for the movement and supply of imperial troops, hand-in-hand with road construction in tribal territory, offered the best means of revolutionising the administrative conduct of frontier warfare, although pack transport remained essential to all operations in the hills. In 1919, five Indian Motor Transport Companies and four R.A.S.C. companies existed in India while a further eight Ford Van Companies were being formed.[128] During the 1919-20 operations five companies of Ford Vans were used on the line of communications of Waziristan Force as far as the road head at Khirgi from where pack transport carried supplies to the forward troops.[129] As roads were constructed in Waziristan in accordance with government policy, lorries slowly replaced pack transport animals, which had represented the 'Achilles heel' of Indian troops during prior frontier operations. Their speed, reliability, ease of protection and vastly increased load-carrying capacity made them a valuable asset. Motor transport added enormously to the mobility and striking power of fighting troops by increasing their radius of action and reducing the number of protective detachments required on the lines of communication, as well as by greatly simplifying the problems of supply and the evacuation of wounded.[130]

The versatility and effectiveness of the armoured car had been demonstrated in India during the First World War, when their mobility, firepower and relative invulnerability to rifle fire had made them ideal for reconnaissance, patrolling, the pursuit of raiding gangs, escort duties and the support of beleaguered outposts in the N.W.F.P. in areas where roads or open terrain existed.[131] The extent to which they could be employed in tribal territory depended on the nature of the terrain. A company of Jeffrey Quad Armoured cars was deployed in Waziristan in October 1921, to 'open roads', co-

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[127] Military Despatch No. 39 to Governor-General in Council, 20th July 1922, L/MIL/7/19238

[128] Brig.-Gen. Lord Montagu, Report on Mechanical Transport and Armoured Motor Batteries in India, (Simla, 1919), pp.1-2 L/MIL/17/5/1870

[129] Report on the Working of the Lines of Communication Waziristan Force by Brigadier-General H.C. Tytler, Inspector General of Communications, Waziristan Force, together with certain Notes and Appendices collected for the information of the Staff College Camberley, (Dehli, 1920), p.21

[130] The Army in India and its Evolution, (Calcutta, 1924), pp.42-3

[131] Armoured Car Training. Training and War (Provisional), (London, 1921), pp.263-9

operate with moveable columns and escort convoys. Similar duties were carried out by No. 7 Company, equipped with Rolls-Royce armoured cars, in the Tochi valley and the Derajat. A reduction in the number of road protection troops resulted, as motor transport convoys were faster and shorter and therefore more difficult to attack.[132]

The employment of tanks, with greater protection, firepower and off-road mobility than armoured cars, was carefully investigated during the spring of 1920 when Colonel P. Johnson, the Superintendent of Tank Design and Experiment at the War Office, toured the frontier and visited Wazirforce at Kaniguram. In a detailed report discussing operations against Afghanistan, internal security and the trans-border Pathan tribes, he enthusiastically proposed that punitive columns consisting solely of tanks, personnel carriers, self-propelled artillery, engineer tenders and armoured ambulances, capable of traversing boulder strewn river beds and invulnerable to rifle fire, could be employed in tribal territory in the future.[133] While he acknowledged that steep and rocky terrain represented an insuperable obstacle to existing tanks, he believed that tracked vehicles could be devised capable of operating in the valleys on the frontier thereby revolutionising hill warfare. The reception his proposals received in London and India from experienced frontier soldiers was justifiably critical.[134] Several officers serving in Waziristan, familiar with the capabilities of tanks, spoke in more guarded terms, emphasising their importance on the lines of communication rather than just as fighting vehicles.[135] Despite believing that ultimately Johnson's views would be correct, Colonel J.F.C. Fuller at the War Office concurred with their opinion:

> My own opinion is that as regards hill warfare we should not trouble too much about tanks as fighting weapons, but that we should concentrate in producing reliable cross-country tractors which will cut down the enormous number of transport animals

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[132] Col. E.B. Hankey,'Report on visit to India', 1st Feb. 1922, L/MIL/7/17132

[133] 'Report on the Possible use of Tanks in India by Lieut.-Colonel P. Johnson, Tank Corps', 9th April 1920, pp.8-40 and Johnson to Napier, 9th April 1920, L/MIL/7/17133

[134] Lt.-Gen. H.V. Cox,'Notes on Colonel Johnson's Report on the use of Tanks in India', 6th Aug. 1920, L/MIL/7/17133. See also comments during discussion following Lt.-Col. P. Johnson,'The Use of Tanks in Undeveloped Country', J.R.U.S.I., 66, 462, (1921), pp.191-204

[135] Matthew-Lannowe to Fuller, 1st April 1921 and Note by Colonel W.S. Leslie, 8th May 1921, L/MIL/7/17133

> and coolies which are required at present to supply the troops…the great problem which now faces the military authorities in India in hill fighting is an administrative one and I am of opinion that a fairly reliable machine can be produced in the course of the next year or two which will go far to solve the present difficulties.[136]

In India considerable interest was maintained in the capabilities of both fighting and supply tanks on the frontier to reduce casualties amongst troops and pack animals.[137] Two experimental tropical tanks arrived at Ahmednagar in January 1922, but broke down before they could be properly evaluated. Colonel E.B. Hankey, who had accompanied the vehicles, held further discussions regarding the use of carrier and fighting tanks in tribal territory; and after touring the frontier added his support to the growing weight of opinion that tanks could be used effectively in frontier warfare.[138] It took some time, however, before other tanks could be designed and produced that were suitable for use in India.[139] An experimental (A.T. 2) "Dragon" carrier tank was carefully examined in March-August 1923 at Ahmednagar and near Peshawar.[140] It was then evaluated by 5th Indian Infantry Brigade, under the command of Colonel W.D. Villiers-Stuart, near Asad Khel in Waziristan between 16th and 21st August 1923. The former commandant of the Mountain Warfare School recommended the use of tanks for trans-border fighting, in addition to other arms, following tests simulating different types of operation common in hill warfare.[141] Major-General J.R.E. Charles, G.O.C. Wazirforce, added his support: 'The very great assistance which they are capable of rendering, in my opinion, merits their inclusion in the establishments of our war formations.'[142] The military authorities in India concurred that tanks had an 'undoubted future in mountain

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[136] Fuller to Cobbe, 20th May 1921, L/MIL/7/17133
[137] Montgomery to Chetwode, 27th Sept. and 16th Nov. 1921, Montgomery-Massingberd Mss, L.H.C.M.A. 133 and Rawlinson to Wilson, 27th Sept. 1921, Wilson Mss, I.W.M. HHW 2/13F/1
[138] Col. E.B. Hankey,'Report on visit to India', 1st Feb. 1922, L/MIL/7/17132
[139] H. Creedy to Under Secretary of State for India, 14th July 1922, L/MIL/7/17132
[140] Review of Important Military Events in India No. 1 of 1923, 15th April 1923, L/MIL/7/12491 and Government of India Army Department to Secretary Military Department, 24th May 1923, L/MIL/7/17132
[141] Report by Colonel W.D. Villiers-Stuart, officiating Commanding 5th Indian Infantry Brigade, Aug. 1923, L/MIL/7/11159
[142] Report by Major-General J.R.E. Charles, officiating Commanding Waziristan Force, 30th Aug. 1923, L/MIL/7/11159

warfare' although their specifications would have to be altered to suit Indian requirements.[143] Orders were placed in the spring of 1924 for four Vickers MK I Light Tanks, armed with two Vickers guns, and four Citroen Kergresse half-track cars, for use as carrier vehicles, but their arrival was delayed by further modifications in their design.[144] A combination of mechanical faults and the cost of maintaining the vehicles meant the Government of India declined to purchase further tanks after they were tested in 1925 with mixed results.[145]

The Third Afghan War and the Waziristan Campaign formed the most extensive use of aircraft in the British Empire, giving the R.A.F. and General Staff in India an opportunity to assess the capabilities of airpower in frontier warfare.[146] Aircraft initially appeared to be perhaps the most significant technological weapon at the disposal of the imperial authorities, capable of quickly penetrating the deepest recesses of tribal territory while enjoying relative invulnerability from direct attack. However, after the promise displayed during the Third Afghan War, when raids on Jalalabad and Kabul directly contributed to a rapid end to the war, the results of independent bombing in Waziristan proved disappointing. Despite intensive bombing the Mahsuds did not submit and rapidly adapted to air attack, refuting claims that air raids would demoralise the local population and make them to submit. The sparsely inhabited mountainous terrain, the small size of villages and the resilience of mud buildings, limited the effectiveness of bombing although considerable casualties were inflicted on livestock. When the Derajat Column reached Kaniguram a special committee, appointed to investigate the damage inflicted by aircraft, discovered that bombing had been inaccurate and that most buildings had been only slightly damaged.[147]

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[143] H.R. Pate, Deputy Secretary to Government of India (Army Department) to the Secretary, Military Department India Office, 27th Sept. 1923, L/MIL/7/11159

[144] Viceroy, Army Department, to High Commissioner for India, 10th March 1924, Birch to Cobbe, 17th March 1924, L/MIL/7/11159 and Review of Important Military Events in India No. 1 of 1924, 9th April 1924, L/MIL/7/12491

[145] Review of Important Military Events in India No. 4 of 1925, 21st Jan. 1925, L/MIL/7/12491 and Maj. E.W. Sheppard, 'The Royal Tank Corps in India between the Wars', in B.H. Liddell Hart, (ed.) The Tanks, (London, 1959), Vol. 1 p.408

[146] See D.E. Omissi, Air Power and Colonial Control. (Manchester, 1991) for a detailed account of the R.A.F. in policing the British Empire.

[147] Waziristan Force Weekly Appreciation for week ending 16th March 1920, P.R.O. WO 106/56

The Bristol Fighters that provided close support to the Derajat Column on the other proved remarkably effective, making the advance into Waziristan possible in face of intense tribal opposition. Aircraft inflicted heavy casualties on lashkars with bombs and machine gun fire, providing heavy, flexible fire support that the infantry had long been denied on the frontier. They dramatically improved imperial morale while reducing that of the opposing tribesmen although several low-flying aircraft were shot down by rifle fire. The effect of close support declined, however, after heavy casualties taught Mahsud lashkars to utilise the rocky, steep terrain for concealment and to cease movement when aircraft operated overhead. During the fighting it was apparent that there were, however, important differences in providing tactical air support on the frontier when compared to conventional military operations. Pilots needed to be well acquainted with the tactics of mountain warfare and to maintain close contact with troops on the ground. An effective means of inter-communication between ground and air was essential to allow troops to indicate targets otherwise hidden from pilots. Popham Panels proved ineffective in mountainous terrain, however, while several ground strips, used to indicate friendly positions, fell into tribal hands during the fighting. The employment of aircraft to direct artillery fire was unsuccessful as few massed bodies of tribesmen, guns or forts were encountered that represented a worthwhile target. Aerial reconnaissance also proved generally unreliable as mountainous terrain afforded excellent cover and concealment, while the clothing of the tribesmen made them difficult to spot from the air. Aerial photographs on the other hand provided valuable tactical and topographical information that aided planning.[148]

The R.A.F. continued to be employed to provide close support, direct artillery fire and supply photographic intelligence. The system of co-operation developed originally on the Western Front between troops and the R.A.F. was gradually modified to meet the requirements of frontier warfare. Bristol Fighters closely co-operated with Waziristan Force during the Wana Expedition, carrying out reconnaissance and bombing sorties with communications between

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[148] Maj.-Gen. S.H. Climo, Commanding Waziristan Force, to the C.G.S., 24th Jan. 1920, Staff College Library 954.914 IND, Despatch on Waziristan, p.18 and Waziristan 1919-20, pp.150-1

ground and air maintained by a wireless set at column headquarters. Aeroplanes were employed to maintain contact between columns and advance and rear guards, to support picquets, assist withdrawals and engage fleeting targets and also to give assistance to isolated piquets and patrols.[149]

The R.A.F. remained firmly convinced, however, that aircraft could be most effectively employed independently to control the trans-border Pathans by carrying out aerial demonstrations, punitive bombing, intercepting raiders and supporting locally recruited irregulars, in accordance with the doctrine of air control originally developed in the Middle East.[150] Aircraft carried out several independent raids on tribal sections implicated in raids on the lines of communication. Following an attack on the 4-39th Garwhal Rifles in March 1921, for example, Makin was bombed for three days and aircraft strafed tribesmen and livestock.[151] The small number of available aircraft, their limited reliability, difficult climatic effects and the restrictions imposed by the political authorities meant that any lessons learnt were inconclusive at best.[152] In 1922 the R.A.F. was given a greater opportunity to employ aircraft in independent bombing operations in Waziristan. The Jalal Khel were bombed in March by D.H.9 bombers and Bristol Fighters, although this proved insufficient to force them to accept terms. In April, aircraft supported the beleaguered khassadar garrison at Wana Fort when it was invested by a hostile Wana Wazir lashkar. A shortage of spare parts, the result of an embargo imposed by the Finance Department, meant that only seven fighters and five bombers could be mustered by the four squadrons available, but these drove the tribesmen away.[153] Although the operations were successful a total of eleven aircraft crashed due to mechanical failure and this along with a shortage of spare parts effectively put the air force in India out of action.[154]

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[149] Despatch by His Excellency General Lord Rawlinson of Trent on the Operations of the Waziristan Force for the period 8th May 1920 to 31st March 1921, (Dehli, 1921), p.9 L/MIL/7/16930 (Hereafter Despatch on Operations May 1920-March 1921)

[150] Trenchard to Rawlinson, 15th Feb. 1921, Trenchard Mss, MFC 76/1/136

[151] Despatch on Operations May 1920-March 1921, p.8

[152] S.E. Pears, Resident in Waziristan, to G.O.C. Waziristan Force, L/P&S/12/3260

[153] Rawlinson to Trenchard, 20th April 1922, Trenchard Mss, MFC 76/1/136/2, Deputy Secretary to Government of India, Army Department, to Secretary Military Department, 4th May 1922, L/MIL/7/16942 and Summary of Chief Events in North-West Frontier Tribal Territory from 1st January to 31st December 1922, (Dehli, 1923), pp.6-7 L/P&S/12/3170

[154] G.O.C. Waziristan Force to C.G.S., 10th April 1922, P.R.O. AIR 8/125 and Webb-Bowen to Trenchard, 20th April 1922, Trenchard Mss, MFC 76/1/289/3

The controversy surrounding the R.A.F. in India following the Wana debacle prompted the despatch of a senior air force officer from England to prepare a detailed report on its role, organisation and administration. Air Vice Marshal J. Salmond and his staff toured the North-West Frontier during the summer of 1922, gathering information regarding the use of aircraft in operations against both the trans-border Pathan tribes and Afghanistan.[155] Despite reservations expressed by military and political officers, Salmond was convinced that aircraft could replace troops in tribal territory, based on experience gained by the R.A.F. in Somaliland and the Middle East. In August 1922 he submitted a report proposing sweeping changes both in the conduct of frontier warfare, and in policy towards the trans-border Pathan tribes. This envisaged the R.A.F. as the primary instrument of tribal control, resting on the belief that sustained independent bombing could disrupt tribal life to such an extent that even the most stubborn tribes would accept terms with comparatively few casualties and without the legacy of hatred which he believed ground operations engendered. An outline scheme was included in which six squadrons would assume control of Waziristan, working in close co-operation with the political authorities.[156] Such sweeping proposals received a mixed reception from the General Staff and the Foreign and Political Department. The latter was opposed to the R.A.F. being given responsibility for Waziristan, fearing that bombing would precipitate further outbreaks of fighting and complicate relations with Afghanistan.[157] Despite strong opposition to the proposals regarding the potential use of aircraft against Afghanistan and for internal security, Lord Rawlinson agreed that the experiment could be carried out in Waziristan as long as a General Staff scheme to permanently occupy the area currently under discussion was also put into effect; however he refused to accept that a conclusive case had been presented sufficient to fundamentally change policy until air control in Mesopotamia had been tested in practice.[158] Until sufficient aircraft were available in India and the

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[155] Omissi, op cit, p.47

[156] Report by Air Vice Marshal Sir John Salmond on the Royal Air Force in India, Aug. 1922, L/MIL/7/7765

[157] Notes by Mr Denys Bray, Secretary to the Government of India in the Foreign Department, 23rd Aug. 1922, L/MIL/7/7765 and S.E. Pears, Resident in Waziristan, to H.Q. Waziristan Force, 5th Aug. 1922, Salmond Mss, B2599

[158] Lord Rawlinson, 'Memorandum on Air Vice-Marshal Sir John Salmond's Report, n.d., L/MIL/7/7765, Rawlinson to Trenchard, 22nd Aug., 1922, Trenchard Mss, MFC

existing squadrons restored to full efficiency, those squadrons already employed on the frontier were used both in minor independent operations and in close co-operation with troops.

The Razmak operations during the autumn and winter of 1922-23, conducted in accordance with a controversial General Staff plan originally proposed in January 1922, finally ended large scale military operations in Waziristan.[159] A mixed brigade with two additional battalions for camp protection was, however, stationed permanently on the Razmak plateau to support the loose political administration and newly raised Civil Armed Forces - Scouts and Khassadars - created to police the Mahsuds and Wazirs.[160] During 1924 imperial control was consolidated by the construction of further roads, bridges and cantonments in Waziristan while the number of incidents between the garrison and local inhabitants declined.[161] Although the R.A.F. was given an opportunity to carry out independent operations against several minor sections in the spring of 1925, the control of Waziristan remained primarily the responsibility of the imperial troops, for a mixture of ethical, political and military reasons, now that the new 'hearts and minds' policy had been adopted in the area.[162]

The extended fighting in Waziristan had provided the Indian Army with further important lessons regarding the conduct of frontier warfare, complementing that learned in the winter of 1919-20, together with further information regarding the capabilities and limitations of modern equipment. Henceforth improvements in tribal armament and tactical effectiveness on the battlefield meant that imperial columns had to operate in considerable strength in the face

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76/1/136/2, Rawlinson to Salmond, 21st/22nd Aug. 1922, Salmond Mss, B2608 and Rawlinson to Montgomery, 5th Sept. 1922, Montgomery-Massingberd Mss, L.H.C.M.A. 135

[159] See Report of a Committee Assembled under Order in Council, dated January 6th, 1922, to consider future policy in Waziristan., (Dehli, 1922) L/MIL/7/15939 and Army Department Despatch No. 42 of 1922, 27th July 1922, L/MIL/7/16951

[160] Army Department Despatch No. 68 of 1923: Policy in regard to Waziristan, 15th Nov. 1923, L/MIL/3/1119

[161] Army Department Despatch No. 24 of 1924: Report by His Excellency Lord Rawlinson of Trent on operations in Waziristan, for the period 21st April 1923 to the 31st March 1924., 10th July 1924, L/MIL/3/240

[162] See Army Department Despatch No. 22 of 1925: Report by Air Vice-Marshal Sir Edward Ellington on the Royal Air Force Operations in Waziristan for the period 9th March 1925 to the 1st May 1925, 9th July 1925 and Sir C Jacob, Commander-in-Chief in India to the Secretary of Government of India, Army Dept., 29th June 1925, L/MIL/7/16950

of even moderate opposition and any advance through tribal territory had to be deliberate, governed by the establishment of a permanent and carefully protected line of communication in its rear. The radius of action of smaller self-contained columns was so limited by the large number of unwieldy pack animals now required that their employment was unfeasible in practice except in the face of light opposition.[163] It was evident that the standard of training and effectiveness of the Indian Army had dramatically improved since the disasters of 1919-20 and that imperial units had to train specially to fight the Pathans. Trials and the recent operations demonstrated that the majority of new weapons and equipment developed in the First World War were largely ineffective, due to the terrain and associated transport and supply problems.[164] Infantry remained the predominant arm and the only means of achieving decisive results in military operations on the frontier. Lewis guns, Vickers machine guns and the 3.7" howitzer were the only significant additions to the Indian arsenal capable of being effectively employed in tribal territory. After some controversy regarding the appropriate organisation and deployment of these weapons, however, it was realised that they did not require any fundamental changes in the tactics employed by imperial troops. Their cumulative effect, however, was to increase the amount of heavy equipment carried in the field, the number of pack animals required to support imperial units and to slow the movement through the hills. The employment of the latest scientific and mechanical equipment, during operations on the North-West Frontier, formed the subject of the 1922-23 U.S.I.I. prize essay competition. In the prize-winning essay Colonel F.S. Keen warned that the employment of modern military technology should be tempered by the fact that the Pathans were British subjects and that the ultimate objective of British policy was to conciliate them and ensure lasting peace on the border.[165] After discussing the use of modern military technology in frontier warfare and recommending the extension of road building elsewhere in tribal territory, Keen concluded:

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[163] General Staff Note on Waziristan, 17th Sept. 1923, Montgomery-Massingberd Mss, L.H.C.M.A. 140

[164] Jacobson, op cit, p.2

[165] Col. F.S. Keen, 'To what extent would the use of the latest scientific and mechanical methods of warfare affect operations on the North-West Frontier of India?', J.U.S.I.I., 53, 233, (1923), pp.393-415

We must not allow ourselves to be led into the error of pinning our faith to revolutionary developments and superseding well tried arms and weapons by others which have not yet proved conclusively that they can perform all that is claimed for them. When such questions arise as the replacing of ground troops by aeroplanes we must "hasten slowly." For centuries past cavalry, infantry and artillery have been found essential for the winning battles. We know that our infantry as at present organised and equipped, if well trained, well led and adequately supported by artillery, can go anywhere and accomplish anything in reason on the Frontier. The day may dawn when we shall be able to dispense with these arms, but emphatically the time is not yet. Meanwhile there is ample scope to apply the developments of science, aerial warfare, wireless telegraphy and telephony, mechanical vehicles armed and unarmed, in co-operation with and as most useful auxiliaries to the more prosaic forces which will inevitably bear the brunt of the fight for generations to come… Finally, when adopting new weapons and new methods we must be careful that in achieving the purely military object, they do not endanger the more important political object which we must always keep in view. Coercion must be used as a stepping stone to control.[166]

Initial enthusiasm regarding the capabilities of new weapons and equipment developed for the Western Front was now tempered by the realisation that, until adapted or redesigned to meet local requirements in India, it had little practical use. Indeed, in many respects the advantages accrued from modern weapons did not counterbalance vastly improved tribal firepower, tactics and greater relative mobility. They also proved more of a handicap when employed on the frontier as they were too immobile or required too much logistical support, while the potential of other weapons had not been fully explored.[167] The drastic retrenchment of the military budget and lack of skilled Indian personnel, moreover, also prevented the acquisition of large quantities of new arms and equipment. Transport

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[166] Ibid, p.415
[167] Capt. J.G. Smyth,'Mechanism as a Substitute for Manpower in Empire Defence', J.U.S.I.I., 52, 228, (1922), p.251

and supply difficulties meant that heavy weapons were restricted to operations in the immediate vicinity of the lines of communication, although the construction of roads in tribal territory allowed motor transport to ease the supply problem that had dogged prior operations. The tactical problem faced by Indian troops operating from a road differed almost entirely from that when operations were conducted on a pack basis, both in terms of the equipment employed and expenditure of ammunition and stores. When operating in the hills even the limited quantities of new arms and equipment used lowered the mobility of imperial troops and increased the quantity of pack transport on which they depended, thereby lengthening columns and exacerbating problems of protection as well as reducing their rate of movement. Captain M.C. Gompertz concluded an article in the *Army Quarterly* discussing the employment of new equipment on the frontier: 'One cardinal fact remains. The use of the Lewis gun enables a reduction in the strength of piquets and to increase fire effect: the motor vehicle and the tractor may speed up operations: wireless telegraphy may add the personal touch: the glider may become the infantry of the air to assist the infantry of the ground: yet the age long principle remains that it is the soldier who will win or lose the frontier.'[168]

The lessons learnt at such cost in Waziristan and appropriate training formed the subject of several articles in the service press written by officers eager to ensure that they were not forgotten by the rest of the Indian Army. Imperial tactics had clearly changed on the frontier. Writing in 1924, Colonel D.E. Robertson wryly observed:

> A large proportion of India's forces are concentrated on the frontier and these troops specialise in hill warfare to a greater extent than elsewhere… One sometimes wonders what the spirits of our forbears, those wardens of these same marches, whose names inspired awe along the whole border, would have to say of our system of permanent piquets, of the numerical strength we now think necessary for a picquet, of the barbed wire, bombs and other impedimenta which are nowadays essentials. Perhaps they would remark that "Safety First,"

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[168] Capt. M.C. Gompertz, 'The Application of Science to Indian Frontier Warfare', A.Q., 10, (1925), p.133

> however admirable a motto for the London streets, never led an army to victory; that, in war, achievement, and an avoidance of risk, do not go hand in hand, and that mobility is the handmaiden of success.[169]

The impact of improved tribal armament on frontier fighting were discussed at length in the J.U.S.I.I. by Colonel F. Kirkpatrick, who complained that the section on mountain warfare in the current edition of F.S.R. was outdated and pointed out that the Mahsuds and Afridis could no longer be regarded as 'savages' in a purely military sense, either in terms of their armament or tactics. As the tribesmen still mutilated dead and wounded, however, specialised tactics were still required to ensure the protection of Indian columns in tribal territory. He warned that operations akin to those in Waziristan during the winter of 1919-20 would recur if serious resistance was encountered, and outlined the modifications in tactics evolved by experience during the fighting, emphasising the importance of increasing dispersion and supporting fire from machine guns, pack artillery and aircraft to facilitate operations.[170] The different systems adopted to protect the lines of communication from tribal attack merited special attention, as continuous road protection now formed such a large part of military operations on the frontier. A wide variety of terms were used to describe piqueting, causing confusion and uncertainty amongst units from other commands in India.[171] The only means of ensuring tactical uniformity lay in further Standing Orders produced by units and formations serving on the frontier that were issued to all officers.[172] The relative merits of different systems of protection used on the march formed the subject of a minor controversy in Waziristan and in the service press, during which officers discussed the relative merits of 'block' or 'battalion and company sector' systems of piqueting.[173] Writing in October 1925, Colonel C.A. Milward, however, warned: 'It

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169 Col. D.E. Robertson,'The Organisation and Training of the Army in India', J.R.U.S.I., 69, 474, (1924), p.326

170 Col. C. Kirkpatrick,'Some Thoughts on Frontier Fighting', J.U.S.I.I., 54, 236, (1924), pp.325-38

171 Col. C. Kirkpatrick,'Some Thoughts on Frontier Fighting, II', J.U.S.I.I., 54, 237, (1924), pp.510-24

172 See Standing Orders for Frontier Warfare. 16th Infantry Brigade 1924, (Ahmednagar, 1924)

173 Capt. B. Bradshaw-Smith,'Protection on the March in Mountain Warfare', J.U.S.I.I., 55, 240, (1925), pp.49-54. See also Wazirforce Training Memorandum No. 2 Mountain Warfare - Protection on the March, 10th Feb. 1924, Matheson Mss,

is contended that it is a great mistake to make mountain warfare too specialised and too hide bound by rules in which only troops specially trained in this form of warfare can specially participate. The general tactics of the British Army as laid down in F.S.R. should be applicable to all warfare.'[174] A series of other articles of considerable professional interest on the subject appeared in the service press in India and England discussing the recent operations in considerable depth.[175] Several books also appeared that discussed the conduct of frontier warfare under modern conditions and appropriate training intended for officers serving in India.[176] As Colonel H. de Watteville observed in a detailed study of the operations in Waziristan: 'The soldier required for frontier must be trained for the end in view. This fact had already been proved in the Tirah Campaign of 1897-98.'[177]

The Waziristan operations and the permanent deployment of imperial troops in close contact with the trans-border Pathan tribes confirmed the need for specialised training in mountain warfare for the Army in India. It was now accepted by the General Staff, India that the general principles of war and a small section on mountain warfare in F.S.R. was an insufficient basis for training the large numbers of troops deployed in the N.W.F.P.. The lessons of Waziristan were incorporated in a new manual that was compiled at A.H.Q. during 1924, intended to complement F.S.R. and the training manuals for the various arms of service. Although the revised 1924 edition of F.S.R. included a chapter on warfare in 'undeveloped' and 'semi-civilized countries', with a brief section on mountain warfare, it directed readers to a new manual under preparation in India for further detailed guidance.[178] The contents of *The Manual of Operations on the North-West Frontier* reflected the important changes that had occurred in the conduct of frontier warfare since the First World War. A total

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[174] Col. C.A. Milward,'Protection on the March, Mountain Warfare', J.U.S.I.I., 55, 238, (1925), p.45

[175] See Maj. H.N. Williamson,'Mountain Warfare', J.R.A., 50, (1923-4), pp.250-5, Maj. M. Everett, 'The Destruction of Makin - February 1923', J.U.S.I.I., 55, 238, (1925), pp.15-29 and Capt. C.W. Toovey, 'The Engagement of Black Hill Piquet on the 21st December 1919', J.U.S.I.I., 55, 241, (1925), pp.54-64

[176] See Lt.-Col. H. de Watteville, Waziristan 1919-20, (London, 1925) and Col. J.P. Villiers-Stuart, Letters of a Once Punjab Frontier Force Officer to his Nephew giving his Ideas on Fighting on the North West Frontier and in Afghanistan, (London, 1925)

[177] de Watteville, op cit,, p.209

[178] Field Service Regulations Vol. II (Operations), (London, 1924), p.215

of 35,000 copies were printed and by October 1925 had been issued to units serving throughout India, after which it formed the doctrinal basis of training in hill warfare for the Army in India. Its contents reflected the Indian Army's extensive experience of military operations against the trans-border Pathan tribes, and brought up-to-date the existing doctrine and system of training caused by improved tribal tactics, leadership and equipment and changes in the organisation, training and equipment of imperial troops. It represented a significant improvement over solely relying on F.S.R. as the basis of all training, although it still discussed the conduct of mountain warfare with close reference to the principles of war. The manual included chapters describing the trans-border Pathans and tribal territory, fighting troops and their characteristics, protection on the march and when halted, the organisation and protection of the lines of communication, the conduct of the attack and withdrawal for all three arms, foraging and demolitions as well as administrative routine in camp and on the line of march. It emphasised the importance of appropriate training for all three arms of service, especially with regard to the development of individual skills of self-reliance, vigilance and initiative to overcome the peculiar difficulties encountered when fighting in tribal territory. Infantry units were urged to achieve a high standard of skill at arms and fieldcraft, as well as physical fitness and endurance to enable their men to move quickly across hillsides in pursuit of tribesmen. Despite the fact that they had not yet been employed, a section was included dealing with tanks in hill warfare as well as the use of the R.A.F. in tribal territory in co-operation with troops. Particular importance was attached to close co-operation between the infantry and mountain artillery to counter increasingly well-armed tribal lashkars. Imperial troops on duty in tribal territory were warned to stay alert and to be suspicious and observant despite long periods without contact with hostile tribesmen. Officers were encouraged to read histories of past campaigns and it was suggested that, wherever possible, training should take place in country approximating the frontier hills. It pointed out, however, that a great deal of valuable instruction could be carried out by means of sand models, maps and cinema films. The manual concluded with three appendices

laying down a form of piqueting slip, suggested headings for standing orders and an exercise for a platoon on piquet duty.[179]

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[179] Manual of Operations on the North-West Frontier of India, (Calcutta, 1925) (Hereafter Manual of Operations)

Chapter Five
The Modernisation of Mountain Warfare
November 1925 - September 1939

The trans-border Pathan tribes were comparatively peaceful during the late 1920s, apart from occasional sniping, skirmishes and minor operations, allowing the political administration backed by the expanded and reorganised Civil Armed Forces (Scouts, Khassadars and Frontier Constabulary) to assume the main responsibility for day-to-day tribal control. Imperial troops remained in close contact with the tribes in the Khyber Pass, the Kurram Valley, Waziristan and the administered areas of the N.W.F.P., supported by the R.A.F., ready to assist the civil administration if required. Throughout the remainder of the inter-war period Indian regiments served a tour of duty of two years out of every six in the Covering Troops' Districts, allowing them to steadily build up a cadre of trained and experienced officers and men. In comparison, British infantry units only served an infrequent one year tour of duty in the area.[1] While stationed in the border cantonments, imperial troops trained intensively in mountain warfare, based on *The Manual of Operations on the North-West Frontier,* supervised by the staff and senior officers of the formations to which they belonged. Standing Orders issued by the staff of formations permanently stationed along the border provided further sources of tactical guidance for both peacetime training and active service, amplifying points laid down in the official manual and taking into account local conditions and requirements at each station.[2] The service press also provided officers with a valuable source of information regarding the conduct of operations in tribal territory and on the use of new equipment.[3] New means of instruction facilitated training. During 1925 Northern Command prepared several

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[1] Lt.-Col. H.B. Hudson, Those Blue Remembered Hills, (Unpublished T.S. Memoir, 1980), p.70 Hudson Mss, Photo.Eur.179, and Col. H.R. Pettigrew, "It Seemed Very Ordinary" Memoirs of Sixteen Years Service in the Indian Army 1932-47, (Unpublished T.S. Memoir, 1980), p.65 I.W.M. 84/29/1

[2] See Kohat District Standing Orders for War and for Local Columns, (Lahore, 1927), Landi Kotal Standing Orders for War 1936, (Landi Kotal, 1936) and Standing Orders for Hill Warfare for 1st (Abbottabad) Infantry Brigade, May 1939, (Abbottabad, 1939)

[3] See Maj. C.F. Boyle,'The Use of Cavalry in Operations on the North-West Frontier of India', J.U.S.I.I., 56, 244, (1926), pp.52-62, Lt.-Col. G.M. Routh,'Trans-Indus Problems. Some New Aspects Considered', A.Q., 17, 1, (1928), pp.23-36 and Col. H. Rowan-Robinson,'The Pack Gun in Mountain Warfare, J.R.A., 52, 3, (1925-26), pp.365-8

cinema films demonstrating piqueting and staff duties required during operations in tribal territory.[4] Indeed by the mid 1920s Indian Army units were highly proficient once again in mountain warfare as result of a combination of specialised training and frequent practical experience.[5]

The tours of duty in the Covering Troops' districts were always regarded as providing imperial troops with particularly valuable and highly realistic training under 'semi-active service' conditions. Indeed the tribesmen were popularly regarded as the best tactical 'umpires' in the world, ready to exploit the slightest mistake committed by unwary troops and thereby secure valuable rifles.[6] As one officer observed:

> There was no pretence at all about our daily military training. Any fool could see the practical necessity of it, and examples were always occurring to show the penalty of neglect. There was not an atom of useless trimmings about our training on the frontier. Everything we did and learned fitted into the essential job of living among a wily and warlike enemy… One bit of slackness. one violation of the "golden rules" of frontier warfare, or one moment's relaxation of vigilance, and retribution would fall quickly upon the offending body of soldiers. For the "enemy" never relaxed their vigilance. They were always round our camps and columns, well armed and tough, just waiting for the moment when the soldier would slip up.[7]

The annual report on the 1925-6 collective training season noted: 'Thus, each year fresh units are tuned up. The experience afforded by the conditions already existing on the Frontier will be invaluable in case of war.'[8] The Waziristan Military District, in particular,

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[4] Review of Important Military Events in India No. 2 of 1925, 4th July 1925, L/MIL/7/12491

[5] C. Chevenix Trench, The Indian Army and the King's Enemies 1900-1947, (London, 1988), p.128

[6] Smyth, op cit, p.63, Lt.-Gen. Sir P. Neame, Playing with Strife. The Autobiography of a Soldier, (London, 1947), p.134 and Maj. J. Croft,'North West Frontier: Training Ground Supreme', A.Q., 122, 1, (1992), pp.51-60

[7] R. Hilton, Nine Lives: The Autobiography of an Old Soldier, (London, 1955), pp.104-5

[8] Report on Collective Training carried out in India during Year 1925-26, 1st July 1926, L/MIL/7/12491

provided ideal opportunities for training during periodic 'flag marches' or 'columns' carried out from Razmak, Manzai and Bannu, during which imperial troops took full military precautions, as well as near continuous camp and road protection duties which now dominated all operations on the frontier. Following the completion of the circular road, lorries increased the mobility of the garrison, extended the circuit of action of columns - the number of days a column could operate without replenishing its supplies - and allowed a steady reduction in pack and draught animal transport. Armoured cars formed a component part of the Razmak column in May 1926 for the first time when it marched to Wana and back, proving invaluable where roads existed for advance and rear guard work.[9] Former battle-grounds in the area, like the Ahnai Tangi, Palosina or Makin, provided considerable interest to officers studying frontier warfare, while local tribesmen were willing to discuss recent operations from 'the other side of the hill'.[10] Those units serving in the settled areas also received instruction in mountain warfare in areas where suitable terrain existed. For example, in Kohat District training areas existed at Chichanna, Dhoda and Siab, Alizai, Khwaja Kizar and Chillibagh ideal for battalion training; while manoeuvres at brigade level were carried out at Ibrahimzai by the local garrison and near Balyamn and Shinwari.[11] In Peshawar District, the Cherat Hills and the hills around the Khyber Pass were also regularly used for training and manoeuvre purposes.[12] British and Indian units normally had a year's notice before they joined formations stationed in the N.W.F.P., allowing them to carry out intensive mountain warfare training in preparation for their move to the frontier. In those districts in India without suitable training areas, officers were encouraged carry out basic drills on the parade ground or else use maps, sand models and cinema films for instruction.[13] An advance party, consisting of officers and N.C.O.s, was normally attached for three months to a unit already serving in a border garrison to

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[9] Official History of Operations on the N.W. Frontier of India, 1920-1935, (Dehli, 1945), p.42 (Hereafter Official History, 1920-1935) and Col. O.C. Borrett, 'Report on March to Wana April-May 1926', 24th May 1926, L/MIL/7/16952

[10] Capt. R.E. Wood,'Life on the Frontier', R.E.J., 42, (1928), p.243. See also "W",'Mahsud Waziristan 1919-20', J.U.S.I.I., 60, 259, (1930), pp.193-200 and Pettigrew, op cit, p.54

[11] Military Report on Kohat District, p.65

[12] Military Report on the Peshawar District 1928, (Dehli, 1928), p.75 L/P&S/20/B245/1

[13] Training and Manoeuvre Regulations 1923 (With additions for India), (Calcutta, 1924), p.29 and Manual of Operations, p.52

familiarise it with local conditions and to ensure a smooth tactical and administrative hand over.[14] These men provided a cadre of experienced instructors when a unit arrived and special 'nursery' columns gave an opportunity for the troops to learn about mountain warfare 'shepherded' by units already in the garrison under the close supervision of experienced officers.[15]

The British and Indian units serving in the Field Army were free to concentrate on the conduct of conventional 'open' warfare, primarily based on operations in Afghanistan against a 'second class enemy', during the cycle of individual and collective training into which each year was divided. A series of large manoeuvres were held during the mid 1920s to study conventional military operations using modern equipment.[16] Several of these exercises also took into account the impact which the independent tribes, astride the lines of communication, would have on operations beyond the North-West Frontier. An exercise in Northern Command in 1928, for example, examined the effect hostile tribesmen interposed between the two opposing armies would have on a conflict in Afghanistan.[17] In 1929 the J.U.S.I.I. prize-essay competition focused on modifications required to the existing doctrine of mountain warfare if the Pathan tribes were assisted by troops equipped with modern weapons, artillery and aircraft; reflecting a wider awareness of the problems likely to be encountered on the frontier in the event of operations against either regular Afghan or Soviet troops.[18]

The priority attached by the Army in India to training in mountain and open warfare was a subject of professional controversy

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[14] Brig. W.J. Jervois, The History of the Northamptonshire Regiment: 1934-1948, (London, 1953), pp.2-3, Lt.-Col. W.E. Maxwell, Capital Campaigners The History of the 3rd Battalion (Queen Mary's Own) The Baluch Regiment, (Aldershot, 1948), p.88 and D.S. Daniell, The Royal Hampshire Regiment 1918-1954, (London, 1955) Vol. III pp.21-2

[15] Lt.-Gen. G.N. Molesworth, Curfew on Olympus, (London, 1965), p.85, Brig. J.H. Prendergast, Prender's Progress: A Soldier in India, 1931-47, (London, 1979), p.57 and Grey to Mother, 4th Dec. 1932, Grey Mss Mss.Eur.D.1037/1

[16] See Eastern Command Manoeuvres, (Simla, 1925) and Report on the Staff Exercise and Manoeuvres held under the orders of the G.O.C.-in-C Northern Command, India 22nd November to 30th November 1925, (Calcutta, 1926)

[17] Report on Northern Command Manoeuvres (India) 1928, (Dehli, 1929) L/MIL/17/5/1815

[18] Maj. L.E. Dennys,'In future campaigns on the frontier we may encounter tribesmen, either equipped themselves with, or supported by other troops possessing modern artillery and aircraft. How can we best, both on the march and in bivouac, combine protective measures to safeguard ourselves against tribal tactics, as we have known them in the past, supported by such modern weapons.', J.U.S.I.I., 60, 258, (1930), pp.5-16

between officers, whose attention focused on a likely conventional conflict, and those concerned with the day-to-day requirements of Indian defence. Normally the focus of British service officers was directed towards conventional military operations and was more critical of the doctrine employed for 'savage warfare' on the frontier, believing that the lesser was by default contained in the greater. Indeed, the tactics of frontier warfare appeared increasingly anachronistic and diametrically opposed to European practice, as the first hesitant steps to mechanise and to absorb the lessons of the First World War were taken in England. After attending the Staff College at Quetta in 1927-29, Lieutenant-General F. Morgan critically observed: 'Frontier warfare had become, over the generations, a matter of extreme formalism, comparable with the wars of stereotyped manoeuvre in Europe in the seventeenth and eighteenth centuries. To many of us who were unhampered by practical experience or preconceived notions it seemed as if the rules of the game had taken charge to the extent of obscuring any well defined strategic object.'[19] The emphasis placed on training for 'savage warfare' by the Army in India and its apparent reluctance to adopt modern equipment was increasingly criticised by British Army officers as units in England began to adopt new equipment and training.[20] In comparison, the Indian Army lagged steadily behind, primarily as a result of budgetary constraints and the lack of equipment suitable for the local requirements of frontier warfare and internal security.[21] The importance of training in mountain warfare, however, was more readily appreciated by Indian Army officers, for whom frontier service formed such a large part of normal military experience. As one officer noted in the J.U.S.I.I. in July 1930:

> There are two forms of warfare to be taught in India, *viz*, open warfare and mountain warfare. Except for those stationed on the frontier the former of course requires the most attention, but mountain warfare should never be entirely neglected in view of

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[19] Lt.-Gen. Sir F. Morgan, Peace and War: A Soldier's Life, (London, 1961), pp.90-1
[20] Ironside to Liddell Hart, 29th May 1929 and 27th Sept. 1929, Liddell Hart Mss, L.H.C.M.A. 1/401, Bvt. Maj. B.C. Dening, The Future of the British Army: The Problem of Duties, Cost and Composition, (London, 1928), pp.60-2, and Jacobson, op cit, pp.27-8
[21] T.A. Heathcote, The Military in British India The Development of British Land Forces in South Asia 1600-1946, (Manchester, 1995),p.242

the fact that wherever the Army in India fights in the future it is almost certain to be in mountainous country. In addition, about a third of our Army in India is presently stationed on the frontier and practically every unit takes a turn of duty there sooner or later. It has been argued and will continue to be argued to the end of all time, particularly by those whose knowledge of mountain warfare is limited, that such training is unnecessary and even detrimental, but the undoubted fact remains that troops unaccustomed to and untrained for warfare in mountainous country are at a very great disadvantage until they have learnt the "tricks of the trade" and are physically fit to climb mountains, which they can never be so long as they confine themselves entirely to foot-slogging on the plains.[22]

The criticism of the way the Indian Army conducted mountain warfare redoubled during the summer of 1930 when civil disturbances in the N.W.F.P. sparked widespread unrest in tribal territory. Elements of the Field Army hurriedly reinforced the garrison of the Covering Troops Districts to deal with a combination of widespread internal disorder and tribal incursions into Peshawar District.[23] During the fighting tribal tactics were increasingly sophisticated and new weapons were employed by lashkars against imperial troops for the first time. In Waziristan a tribal gun was used against Sorarogha post but fortunately for the defenders, the South Waziristan Militia, its breech block blew out putting it out of action.[24] Land mines made from gelignite or explosives from unexploded R.A.F. bombs were employed on the Khajuri Plain as defensive weapons against armoured cars and lorries.[25] The conduct of the military operations in Peshawar District and Waziristan was heavily criticised in the popular press in India while the fighting was in progress. Such criticism mounted during the autumn and winter while further operations were carried out on the Khajuri Plain by three brigades,

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[22] "An Infantry Officer",'Collective Training in a Battalion', J.U.S.I.I., 60, 259, (1930), p.128

[23] See Despatch by H.E. Field Marshal Sir W.R. Birdwood on the Disturbances on the North-West Frontier of India from 23rd April to 12th September, 1930, (Dehli, 1930), L/MIL/7/16956 (Hereafter Despatch on Disturbances)

[24] Summary of Events in North-West Frontier Tribal Territory. 1st January, 1930, to 31st December, 1930, (Simla, 1931) L/MIL/7/16944 (Hereafter Summary January - December 1930)

[25] Brig.-Gen. E.B. Matthew-Lannowe, 'Land Mining in Frontier Warfare', J.R.U.S.I., 79, 514, (1934), pp.339-54 and Official History 1920-1935, pp.120-1

intended to deny the Afridis the use of jumping-off areas used earlier that year, and to cover the construction of a network of roads and posts.[26] It appeared to many observers that the army had grown ponderous, over-cautious and its tactics too stereotyped, especially after Afridi lashkars penetrated Peshawar District and escaped relatively unscathed back across the administrative border. In comparison, the high mobility and effectiveness of the lightly equipped Scouts and Frontier Constabulary had enabled them to deal successfully with elusive tribal raiders throughout the operations, prompting accusations that the Indian Army was incapable of performing its role in the watch and ward of tribal territory. The fact that it had been found necessary to reinforce the garrison in Peshawar District with such irregulars appeared to indicate that its effectiveness had declined, prompting several suggestions in the press for the re-establishment of a localised force organised, trained and equipped exclusively for operations against the trans-border Pathans.[27]

The lessons the Indian Army learnt from the 1930-31 operations were mixed and contradictory. The mobility conferred by the road network in Waziristan and within the N.W.F.P. together with the provision of motor transport, had altered the tactical and administrative conduct of frontier warfare, enabling reinforcements to be rushed to threatened points along the border. For example, two and a half infantry battalions and a company of sappers were transported 42 miles by lorry between 7th and 9th July 1930 from Bannu to reinforce the Razmak garrison. Armoured cars were used extensively in Peshawar District between 7th and 14th August to patrol the area, and in Waziristan to support isolated posts. The speed of motor transport columns also simplified piqueting and lightened the task of the road protection troops. Lorries transported piqueting troops and their supporting machine guns in areas where light opposition was encountered, making it possible to employ each echelon on more than one task a day, without impeding a column's movement and ensuring that troops remained fresh. Perhaps more importantly, motor transport greatly simplified the logistical and

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[26] Capt. E.E. French, 'Tribal Ordnance', J.R.A., 57, 4, (1930-31), pp.506-7 and "Slora", 'The Siege of Sararogha', J.U.S.I.I., 61, 263, (1931), pp.174-81

[27] 'Editorial', J.U.S.I.I., 61, 262, (1931), pp.1-9 and Mauser,'A Forgotten Frontier Force', English Review, 52, (1931), pp.69-72

administrative problems encountered by Indian troops operating in tribal territory. A convoy of 84 lorries carried 5 1/2 days supplies, for example, for the Razmak Column on 23rd July 1930, a distance of 15 1/2 miles from Razmak to Ladha, along roads and the bed of the Baddar Toi river, before returning to camp later the same day. Indian columns utilising motor transport were tied, however, to advancing along predictable routes, enabling hostile tribesmen to anticipate their lines of approach, to concentrate and prepare defences. Furthermore, the majority of motor vehicles were still restricted to those areas where animal-drawn carts had previously been employed as no vehicles were capable of operating in the hills.[28]

The off-road mobility and tactical effectiveness of Indian columns operating in Waziristan and Peshawar districts had now, however, sharply declined due to the large numbers of troops deemed necessary and changes in the organisation, equipment and training of the Indian Army. Indeed, the pace of an advance and the distance a column could march in a single day were lower than they had been fifty years earlier as the number of mules on which they depended had dramatically increased due to the higher scales of arms, equipment, supplies and maintenance services now required in the field. The growing 'tail' of pack animals compounded the administrative and tactical problem faced by Indian commanders and acted as a brake on mobility, reducing the circuit of action of columns and slowing down every stage of operations, lengthening the line of march and exacerbating the already difficult problem of ensuring all-round protection.[29] The company of Vickers machine guns that had been established in each British and Indian infantry battalion in 1929, in accordance with a new imperial establishment, compounded the problem as additional mules were needed to carry these comparatively immobile heavy weapons and their ammunition. The rifle strength of Indian battalions, which now consisted of a machine gun and three infantry companies, was considerably reduced, despite initial restrictions being placed on the number of machine guns in Indian units to maintain both numbers and mobility in the hills.[30] Training the

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[28] Ibid p.17, Review of Important Military Events in India No. 3 of 1930, 28th Oct. 1930, L/MIL/7/12491

[29] 'Editorial', J.U.S.I.I., 61, 262, (1931), p.8

[30] Kirke to Bethell, 1st June 1928, Kirke Mss, Mss.Eur.E.396/7, Army Department Despatch No. 20 of 1928: Reorganisation of Cavalry and Infantry units in India, 29th Nov. 1928, and Memorandum Explaining the Proposed reorganisation of Cavalry and Infantry Units in India, L/MIL/7/13317

previous winter had already indicated that an infantry battalion was unable to provide the same number of piquets, lowering the distance it could protect from three to two miles which effectively limited the distance a column could march in a single day.[31] Moreover, there was little official guidance on how to employ a reorganised battalion in tribal territory and experiments during 1930 met with mixed results. The extra firepower conferred by the additional machine guns dramatically increased the expenditure of ammunition, making lashkars wary of engaging Indian columns or following up rearguards, thereby limiting opportunities to inflict heavy casualties.[32] The strict observance of full military precautions and an obsession with the principle of security overrode other operational requirements, slowing movement to a crawl and tying Indian columns to cautious and unimaginative advances along the valley floors. It now took longer to piquet a route as periodic halts were necessary while covering machine gun and artillery fire was carefully arranged to support the placement and withdrawal of piquets. An avoidance of casualties, the recovery of dead and wounded and efforts to prevent the theft of arms and ammunition stultified efforts to bring hostile lashkars to battle or to achieve surprise. An inability to differentiate between the tactical requirements of conventional warfare and those on the frontier further compounded the problem. Indian commanders mounted deliberate set-piece attacks backed with a full panoply of supporting arms, despite the fact that the lashkars seldom awaited the results. Attacks often got bogged down while reconnaissance, order groups, artillery barrages and close co-operation with other arms were organised.[33]

The Indian Army's role in border defence and tribal control was carefully examined by a committee appointed by the Government of India during the spring of 1931. A series of civil and military witnesses were highly critical of the performance of the Indian Army, and called for the resuscitation of the P.F.F. and the 'de-regularisation' of the units stationed in the N.W.F.P.. The final report issued by the Tribal Control and Defence Committee echoed earlier criticisms and suggested that the General Staff should

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[31] Memorandum on Army Training (India) Collective Training Period 1929-30, (Simla, 1930), p.4 L/MIL/17/5/2199

[32] Despatch on Disturbances, p.18 and Review of Important Military Events in India No. 3 of 1930, 28th Oct. 1930, L/MIL/7/12491

[33] "Mouse",'Babu Tactics', J.U.S.I.I., 61, 262, (1931), pp.60-65

consider the merits of forming a new P.F.F. and measures to lighten the arms and equipment of regular units.[34] The General Staff in India quickly dismissed the idea that a portion of the Indian Army should be localised on the North-West Frontier, due to the inherent organisational problems that were involved. Indeed such a drastic change ignored the other important roles of the Covering Troops which could not be carried out by lightly equipped troops and the reasons that had originally prompted the delocalisation of the P.F.F. in 1903. The General Staff argued that a military organisation designed to meet Afghanistan, supported by foreign troops and the frontier tribes, was by default automatically suited to fighting the tribesmen alone. Moreover, as long as the North-West Frontier and Afghanistan remained the most likely theatre of operations of the Indian Army, it strongly believed that all imperial troops required experience of the terrain and similar tactics to those required in Afghanistan.[35]

The military authorities attempted instead to increase the strategic mobility and circuit of action of the Covering Troops by building further roads in the N.W.F.P. and mechanisation. A network of roads on the Khajuri Plain was the most immediate extension of the road building policy outside of Waziristan and further roads were completed in the latter area in accordance with the Modified Forward Policy.[36] In 1933 a further series of roads began to be constructed on the North-West Frontier as funds became available, although road construction proved an expensive and time-consuming process.[37] It was accepted that henceforth all punitive operations in tribal territory would be combined with road construction to allow small, lightly-equipped columns to be supplied and operate in the hills as well as extending political control in tribal territory.[38] Hand-in hand with road building went the introduction into service in India of wheeled motor transport, tractors, half-tracks and fully tracked vehicles with improved performance and cross-country mobility. Further trials

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[34] Report of the Tribal Control and Defence Committee 1931, (Dehli, 1931), pp.38-9 L/MIL/17/13/34

[35] General Staff Criticism of the Tribal Control and Defence Committee, 19th May 1931, L/P&S/12/3171 and Jacobson, op cit, p.92

[36] Review of Important Military Events in India No. 4 of 1931, 21st Jan. 1932, L/MIL/7/12492 and Col. C.V. Jackson, 'The Wana-Ladha Road', R.E.J., 50, (1936), pp.27-37

[37] Field-Marshal Sir P. Chetwode, 'The Army in India', J.R.U.S.I., 82, 525, (1937), pp.7-8 and p.12 and Jacobson, op cit, p.336

[38] Gen. Sir K. Wigram, 'Defence in the North-West Frontier Province', J.R.C.A.S., 24, 1, (1937), pp.77-8

of 30cwt and six-wheeled motor lorries were completed in 1932 that had superior performance to those already in service holding out the prospect that they could be more widely employed in tribal territory.[39] Two Carden Lloyd Mark VI Armoured Machine Gun Carriers, ordered in 1929, were tested at Quetta and Razmak during the summer of 1930, with such success that the military authorities were convinced that tracked vehicles would be superior to wheeled for Indian requirements.[40] Mk 1A Light Tanks tested in Waziristan the following year achieved speeds of 30 miles per hour on level ground, 4-12 miles per hour cross-country and could climb relatively steep gradients. Their ability to move in areas impassable to wheeled vehicles, to turn in their own length on narrow roads, climb small features and to penetrate to the rear of positions occupied by tribesmen armed only with rifles was a significant improvements over existing armoured cars. Moreover, the trials indicated that they could remain unsupported during withdrawals while other troops evacuated a position, and it also appeared they would be able to carry out all reconnaissance and protective duties hitherto performed by armoured cars. As a result it was decided to re-equip two armoured car companies with Light Tanks as soon as possible.[41]

The improvement of the off-road mobility of Indian troops in mountainous terrain represented a far more difficult problem. The General Staff in India attempted to address it by a combination of reducing or lightening personal equipment, decreasing the scale of supporting weapons, cutting down the number of pack animals required to support imperial troops and changes in training. A reduction in the weight of personal clothing, arms and equipment offered the easiest means of achieving a greater level of mobility in the hills. Many Indian battalions replaced their heavy ammunition boots with *chaplis* (grass sandals), removed gaiters and substituted light weight clothing in place of the normal issue. The amount of ammunition and grenades carried by each soldier was also reduced. Troops were issued

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[39] Review of Important Military Events in India No. 1 of 1932, 22nd April 1932, L/MIL/7/12492

[40] Review of Important Military Events in India No. 2 of 1929, 11th July 1929 and Review of Important Military Events in India No. 2 of 1930, 12th July 1930, L/MIL/7/12491

[41] Review of Important Military Events in India No. 1 of 1931, 22nd April 1931, L/MIL/7/12491 and Progress Report for the year 1930-31 on Distribution of the Army and Royal Air Force in India, their preparedness for War and for the Maintenance of Law and Order within India, 1929 also Measures in Hand during 1931-32, (Dehli, 1931), p.19 L/MIL/17/5/1235

with iron rations to cut down weight and lower scales of equipment were adopted by units while on frontier service. A replacement for the heavy, unreliable and cumbersome Lewis Gun, with its attendant mule, and the Vickers machine gun was tested during 1932 in India.[42] Vickers Berthier light machine guns were considerably lighter and more reliable than their predecessors, and, after extensive trials, began to be issued to Indian units during 1934, increasing the mobility of imperial troops without loss of firepower, as the weapon and its ammunition could be manhandled in frontier fighting.[43] Despite continued criticism of the new machine gun company, the Vickers was retained in service and the number in each battalion was increased during 1931 by two further weapons, to keep Indian battalions organised on the same lines as the rest of the British Empire.[44]

The reduction or complete replacement of the large quantity of pack transport used by the Covering Troops was carefully considered as it represented the main brake on the mobility of columns operating in the hills. During the early 1930s, the administrative tail of Indian columns was successfully docked by cutting down superfluous animals and the number of troops required for their care and protection. However, despite being regarded as anachronistic by many officers in England, pack mules and camels still remained essential in all operations mounted beyond a road head in tribal territory.[45] Air supply was also carefully considered as an alternative means of reducing the quantity of pack animals. The ability of transport aircraft to maintain and transport troops and to reinforce isolated posts had been tentatively investigated by officers at A.H.Q. in 1928 when a flight of two Bomber Transport aircraft was deployed in India.[46] A wireless set and stores were parachuted into Sorarogha post in Waziristan in 1930 when it was surrounded by a hostile

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[42] Review of Important Military Events in India No. 3 of 1932, 9th Nov. 1932, L/MIL/7/12492 and Jacobson, op cit, p.320

[43] Review of Important Military Events in India No. 2 of 1934, 21st July 1934, L/MIL/7/12492

[44] A.H.Q to Headquarters Northern Command, Southern Command, Eastern Command, Western Command and Burma Independent District, 1st June 1931, L/MIL/7/5505 and Progress Report for the year 1931-32 on Distribution of the Army and Royal Air Force in India, their preparedness for war and for the maintenance of Law and Order within India, 1929, also Measures in hand during 1932-33, (Simla, 1932), p.17 L/MIL/17/5/1235

[45] Field Marshal W.R. Birdwood,'Recent Indian Military Experience', United Empire, 22, (1931), p.246

[46] Field Marshal Sir W. Slim, Defeat into Victory, (London, 1956), p.544

lashkar.[47] Two days' rations were also dropped by aircraft later the same year to a column during the biennial Chitral relief.[48] Despite the potential that had been demonstrated on both occasions, the General Staff remained sceptical because of the limited number of aircraft available, the expense and their inability to evacuate casualties.[49] A lack of adequate funding decided the issue by precluding the purchase of an additional squadron of Bomber Transport which had been proposed in 1930.[50]

The improvement of the tactical effectiveness and mobility of imperial units by changes in current tactical doctrine and training was also examined by the General Staff and discussed in the military press. It was readily accepted by many officers that continued improvements in tribal armament and tactics, required imperial troops to improve mobility, display increased initiative, and possess a high standard of training in mountain warfare. As Captain D.McK. Kennelly observed in an article in the *Journal of the Royal Artillery*: 'Training for mountain warfare cannot remain stationary. With each year the danger on the North-West Frontier of India increases; the tribesmen are becoming better armed and better acquainted with our manner of dealing with them. Every endeavour should be made to counter this increase in efficiency on their part by new methods of training.'[51] Several revisions in *The Manual of Operations on the North-West Frontier* had already been submitted by Northern Command in 1930 taking into account recent changes in organisation, equipment and training, but the publication of a new volume was shelved by A.H.Q. until further experience had been assimilated and until other commands had submitted their views.[52] The lessons learnt in Peshawar District, Waziristan and on the Khajuri Plain during the 1930-31 were carefully evaluated by the General Staff. The annual report on

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[47] Despatch on Disturbances, p.17

[48] Summary of Administration of Field Marshal Sir W.R. Birdwood as Commander-in-Chief India, (Simla, 1931), p.39 L/MIL/17/5/1619 and Summary January 1930 - December 1930, p.2

[49] General Staff Criticism of the Tribal Control and Defence Committee, 1931, 9th May 1931, pp.3-4 L/P&S/12/3171

[50] Army Department Despatch No. 20 of 1930: Proposal to increase the strength of the Royal Air Force in India by an Air Transport Squadron, 25th Sept. 1930, and G.M. Young, Secretary to the Government of India, Army Department, to the Secretary Military Department, India Office, 18th Aug. 1931, L/MIL/7/7769

[51] Capt. D. Mc. Kennelly, 'Artillery Support of Pickets in Mountain Warfare', J.R.A., 57, 2, (1930-1), p.253

[52] Memorandum on Army Training (India) Collective Training Period 1929-30, (Simla, 1930), p.13 L/MIL/17/5/2199

collective training issued in July 1931 discussed the employment of motor transport for the rapid despatch of reinforcements to the Covering Troops and to increase the mobility of columns. Night operations on both large and small scales were also recommended as a means of combating Pathan lashkars after they were effectively employed by Nowshera Brigade on the Khajuri Plain. A large amount of experience was also gained on the Khajuri and Aka Khel plains regarding the use of armoured cars to carry out tactical reconnaissance, cover the advance of columns and establishing piquets, protecting perimeter camps and, finally to escort motor transport convoys. Further amendments to *The Manual of Operations on the North-West Frontier of India* were suggested by Northern Command, but until further experience of the new machine gun organisation in infantry units, the mechanisation of the second line transport, and the capabilities of light tanks in hill warfare had been gained a revised manual was not sanctioned.[53] A series of articles were published in the J.U.S.I.I. which took into account changes in the organisation, equipment and training of the Indian Army and discussed their impact on the conduct of frontier warfare.[54] The inherent difference in tactics between 'civilised' and hill warfare, for example, was discussed by Lieutenant-Colonel O.D. Bennett in April 1933 who believed that, although orthodox frontier warfare tactics were still effective, the present system of training was responsible for the recurrence of 'regrettable incidents' which he ascribed to neglect of the principles of surprise and security, incorrect application of fire and movement and faulty training in the use of ground.[55]

The General Staff did not radically alter the system of periodic relief of units stationed in the N.W.F.P. or the system of training used by the Army in India, although the amount of time devoted to training in mountain warfare was increased. Particular attention was now paid to improving physical fitness, speed of cross-

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[53] A.H.Q. India Training Memorandum No. 2 Collective Training period 1930-31, (Simla, 1931), pp.3-6 L/MIL/17/5/2199

[54] "Light Infantry",'Mobility', J.U.S.I.I., 62, 266, (1932), pp.9-29, Capt. G.H. Pulling,'Some Suggestions for the Employment of Machine Guns on the North West Frontier', J.U.S.I.I., 62, 267, (1932), pp.163-76, and Capt. H.L. Davies,'Military Intelligence in Tribal Warfare on the North-West Frontier of India', J.U.S.I.I., 63, 272, (1933), pp.289-300

[55] Lt.-Col. O.D. Bennett,'Some Regrettable Incidents on the N.-W.F.', J.U.S.I.I., 63, 271, (1933), pp.193-203

country movement and the individual skills required in tribal territory; with a resulting improvement of the general efficiency of most units. Hill warfare also formed part of the curriculum of the newly opened Military Academy at Dehra Dunn, at which Indian cadets were given practical instruction during camps held in the foothills of the Himalayas.[56] It was generally accepted that any British or Indian unit could quickly become proficient in the tactics of mountain warfare. However, the system of reliefs meant that at any one time half the border garrisons consisted of units whose standard of training on arrival did not meet accepted standards, often resulting in too close adherence to the letter of the guidelines laid down in the training manuals, lack of confidence and an over-obsession with protection.[57] The majority of Indian Army battalions contained a large cadre of officers, N.C.O.s and other ranks with practical experience and training in frontier warfare. When the 2nd/14th Punjab Regiment was stationed at Mir Ali in Waziristan in November 1933, for example, all its officers, except newly joined subalterns, were 'old hands' with prior frontier experience. The frequent incidence of service in the N.W.F.P. kept most Indian battalions 'Frontier-minded', allowing them to quickly achieve a full state of efficiency by intensive training when they returned to a border station. In addition, tactical guidance was issued to troops on the frontier, to supplement the official training manuals, intended to acquaint them with local conditions. Northern Command recommended units arriving in Waziristan, for example, to read the official history and an unofficial textbook on the 1919-20 operations, and provided them with copies of various Standing Orders and tactical notes issued by the staff of Waziristan District.[58]

British battalions serving on the frontier were generally unprepared for operations in tribal territory, with prior training and experience predicated on conventional 'open warfare' or internal security duties. An intermittent one year tour of duty with the Covering Troops prevented British infantry battalions from accumulating an experienced cadre of 'frontier hands', placing even greater reliance on 'on the job' training. The only guidance

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[56] Brig. J.P. Collins, 'The Indian Military Academy', The Asiatic Review, 33, 113, (1937), p.112d
[57] Elliot, op cit, pp.117-8
[58] Waziristan Relief Notes, (Northern Command, 1933)

immediately available to British units arriving in India was a small section on 'Warfare in Undeveloped and Semi-Civilised Countries' in F.S.R., which recommended that units pay close attention to *The Manual of Operations on the North-West Frontier*.[59] British battalions normally understudied experienced Indian units until they developed an eye for the terrain, became physically fit and acquired knowledge of the specialised requirements of hill warfare. Although some battalions became highly proficient during their tour of service, in general British units were seldom as effective as Indian Army battalions in terms of cross-country mobility or familiarity with local tactical requirements. Moreover, it often proved more difficult to ensure that British troops maintained as high a standard of watchfulness and alertness as Indian troops over extended periods of time.[60] As Colonel H. Pettigrew later observed:

> How good or bad these regiments were on the frontier depended on just one thing, and that was how ready they were to learn. All the Indian and Gurkha regiments spent two years in every six on the frontier and had a large proportion of old men experienced in frontier warfare and the ways of the Pathan. Brigadier and Staff of Razmak, Bannu and Wana brigades had all spent many years in Waziristan or elsewhere on the frontier. They all said the same, and we all came to know it. If a British regiment arrived at Razmak, or better still at Bannu prior to its march up to Razmak, and said: "We are new to this. You are not. Please teach us!" then it would soon be a regiment well able to look after itself and take a share of responsibility in mobile columns, piqueting and so on. But let a regiment think that it knew, and that it was too famous to have to learn, to think that the Highlands of Scotland bore any real resemblance to the mountains of Waziristan, and that regiment might have trouble. And during its year in Waziristan it would be of little use to anyone, and often a liability...[61]

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[59] Field Service Regulations Vol. II (Operations), (London, 1929), p.207

[60] Prendergast, op cit, p.57, J. Morris, Hired to Kill. Some Chapters of Autobiography, (London, 1960), p.127 and "The Looker-On",'The North-West Frontier in the Thirties', A.Q.D.J., 97, (1969), p.249

[61] Pettigrew, op cit, p.65 See also pp.88-9

The combination of cap-badge rivalry, a rapid changeover of personnel during their period of service in India, the comparative amateurism of British officers, and racism militated against the assimilation of the necessary skills required on the frontier from experienced Indian units. A degree of professional arrogance also acted as a bar to learning. As Major General C.W. Gwynn observed in 1934, to many British officers trained to think solely in terms of the events of the Great War, internal security and frontier policing appeared of comparatively insignificant importance.[62]

Training of British officers, N.C.O.s and men was facilitated by the publication of an unofficial textbook in 1932 written by General Sir Andrew Skeen. *Passing it On: Short Talks on Tribal Fighting on the North-West Frontier of India* provided a detailed source of clear and comprehensive information in an easily readable form regarding the trans-border Pathan tribes, tactics and administration in hill warfare, based on the author's extensive experience.[63] It assumed an authoritative position, running to three editions, and was widely read in Britain and India. Two copies were specially issued to British Army officers' and sergeants' messes and one copy to other British and Indian combatant units in India at the orders of the Commander-in-Chief, Sir Philip Chetwode, to allow British soldiers to benefit from the tactical and administrative guidance provided by one of the Indian Army's most experienced frontier soldiers.[64]

The tactical handling of frontier operations continued to be criticised in the service press, despite a further training directive issued in March 1933 by A.H.Q., which emphasised the importance of light infantry training, lightening personal equipment, reducing the logistical tail of Indian columns and improving cross-country mobility not only for mountain warfare but also in conventional military operations.[65] Writing in the J.U.S.I.I., one anonymous officer suggested that lightly equipped parties of infantry, operating without mules or heavy equipment, could achieve sufficient

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[62] Maj.-Gen. Sir C.W. Gwynn, Imperial Policing, (London, 1936), p.7

[63] Gen. Sir A. Skeen, Passing it On: Short talks on Tribal Fighting on the North-West Frontier of India, (London, 1932), and J.G.S.,'Reviews', J.U.S.I.I., 62, 269, (1932), pp.589-91

[64] Indian Army Order 80. Books- "Passing it On" by General Sir Andrew Skeen, 22nd Dec. 1932, L/MIL/17/5/274

[65] A.H.Q. India to G.O.C.-inC. Northern, Western, Eastern and Southern Commands, 31st March 1933, L/MIL/7/12492

mobility to secure surprise and bring the tribesmen to battle. "Auspex" singled out for criticism the number of Vickers machine guns now in each battalion and argued that they reinforced dependence on brigade columns operating on the roads and piqueting.[66] The growing complexity of modern weapons, mechanisation and the increasing dependence of Indian columns on maintenance services in the field was explicitly linked to the declining effectiveness and relative mobility of the Indian Army in the question set for the 1933 J.U.S.I.I. prize-essay competition. 'Borderer' argued in the winning essay that military organisation, equipment, armament and training devised for 'civilised' European mass warfare were inappropriate for operations against lightly armed and highly mobile tribal skirmishers. Indeed, a growing preoccupation with conventional warfare meant that the Indian Army was ignoring the immediate and pressing requirements of tribal control in which it was becoming increasingly ineffective. In a telling critique, he identified the fundamental conflict between the requirements of tribal control and European warfare that had been made explicit with the initial hesitant attempts of the Indian Army to modernise during the early 1930s. 'Borderer' noted that the Indian Army needed to compromise between large scales of modern weaponry and mobility in the hills:

> Surely the answer is that for operations on the North-West Frontier, for the most likely *rôle* of a large majority of the Indian Army year in year out, they are unnecessary and worse than unnecessary, dangerous. Damaging because they destroy mobility, damaging because they sap *morale* and initiative, damaging because they lead to an inevitable downpeering contempt among friend and foe alike, politely veiled sometimes on the part of the Scout, jeeringly open on the countenance of the more ribald tribesman; damaging because the necessity for their study prevents officers from studying their more likely *rôle* and training fully their men in that *rôle* which two matters are in themselves a fully whole time task… Let us teach the man in the ranks and the Platoon Commander to rely first on his own rifle with the addition of the grenade if necessary,

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66 "Auspex", 'A Matrimonial Tangle (or Mountains and Machine Guns)', J.U.S.I.I., 63, 272, (1933), pp.367-74

> backing it up with the light automatic which he must render more mobile than it is at present. In graver trouble let them call upon the bigger brother with the Vickers Gun and when things are really sticky let them ask for the final arbiter of frontier battle, the 3.7 How.[67]

'Borderer' believed that the growing divergence between the military requirements of 'savage' and 'civilised' warfare in terms of training, organisation and equipment could no longer be reconciled, and presented such an insuperable problem that he presented a detailed scheme for the formation of a localised frontier force for service on the North-West Frontier.[68] Despite presenting such detailed and well-argued proposals, the localisation of a portion of the Indian Army on the North-West Frontier remained an anathema to the General Staff in India. Several articles were published during 1934 which were more explicit regarding the existing tactical doctrine. Although it was still generally accepted that to protect pack transport piqueting remained essential, many officers questioned the continued use of perimeter camps due to the loss of mobility and labour their construction entailed. Moreover, as each battalion now possessed a large number of automatic weapons which greatly simplified protection at night it appeared that massed night assaults by tribesmen were a thing of the past. Colonel H.S. Pearson suggested in the J.U.S.I.I. in 1934, that mobility could be improved as a ring of outposts and machine gun posts could now replace perimeter defences thereby freeing an additional two to three hours of each day's march.[69] The need for some form of perimeter defence, however, was supported by most experienced Indian Army officers and training remained based on accepted methods, although on several occasions during the 1930s dispersed camps were tried by units eager to test their effectiveness.[70] Apart from those minor modifications

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[67] "Borderer", 'With the Tendency of Modern Military Organisation towards Mechanisation, the increasing complexity of modern weapons and the dependency of troops on the maintenance services, it is asserted by many that Regular troops are losing the degree of mobility necessary for the successful performance of their role on the North-West Frontier. Discuss how this can be overcome so that freedom of action and tactical mobility are assured in the Army of India.', J.U.S.I.I., 64, 274, (1934), pp.14-5

[68] Ibid, pp.15-26

[69] Lt.-Col. H.S. Pearson, 'The Perimeter Wall', J.U.S.I.I., 64, 274, (1934), pp.119-22

[70] "Shiggadar", 'Letters to the Editor - The Perimeter Wall', J.U.S.I.I., 64, 275, (1934), pp.280-2 and Brig. N.L. St P. Bunbury, 'Dispersion on the Frontier', J.U.S.I.I., 74, 315, (1944), p.181

introduced since the First World War the doctrine of frontier warfare remained largely unchanged. Writing in 1934, Major-General H. Rowan-Robinson, however, summed up an opinion shared by a growing number of officers in India:

> The normal methods employed in such operations are elaborately described in the training manuals and elsewhere. A considerable literature has in fact grown up around them. They are, however, recognized to be thoroughly unsatisfactory; and, with the multiplication of weapons, vast requirements in ammunition and insistence on luxuries, they are daily becoming more so.[71]

The Loe Agra and Mohmand operations during 1935 provided an opportunity to assess the impact of new equipment and changes in the training and organisation of the Indian Army. Between February-April 1935, Nowshera Brigade assisted the political authorities to expel hostile tribesmen from the Loe Agra salient. During the fighting, night operations were successfully employed on several occasions to facilitate movement, counter snipers and seize positions as preludes to larger attacks.[72] The annual report on collective training issued in July 1935 concluded: 'Such operations were rare in the past, but as they offer us a great opportunity for effecting surprise they are likely to become common in the future.'[73] An equivalent of four brigade groups, a cavalry regiment, field artillery and a light tank company were committed to further operations in Mohmand country in August-October, in conjunction with independent operations by No. 1 (Indian) Wing, after workmen repairing the Gandab road were attacked by hostile Burhan Khel and Isa Khel Mohmand tribesmen.[74] The combination of lightened and reduced personal equipment carried by Indian sepoys and special light infantry training succeeded in speeding up piqueting and improved cross-country mobility, but the machine gun company in each battalion still acted as a serious brake on mobility across difficult terrain. Nearly the entire strength of a

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[71] Maj.-Gen. H. Rowan-Robinson, The Infantry Experiment, (London, 1934), p.10

[72] Report on Loe Agra Operations, 17th July 1935, L/MIL/7/16970 and M.O.3 Unofficial Letter on Afghanistan and the North-West Frontier of India. 1st October, 1934 - 30th June, 1935, (Simla, 1935), pp.12-3 L/WS/1/192

[73] A.H.Q. India Training Memorandum No. 10 Collective Training Period 1934=35, (Dehli, 1935), p.7 P.R.O. WO 33/1375

[74] Report on Mohmand Operations, 28th Nov. 1935, L/MIL/7/16968, Official History 1920-1935, pp.189-244 and Jacobson, op cit, p.80

support company was required to manhandle two Vickers machine guns and their ammunition to positions in the hills. The rifle strength of British and Indian infantry battalions was quickly absorbed in protective duties, especially guarding the growing quantity of supporting services used in the operation. The hours of darkness were routinely exploited to seize important tactical features and thereby preclude tribal resistance, quicken the pace of the advance and extend the distance columns could march in a single day. The willingness of Indian commanders and units to undertake large operations at night was perhaps the most striking feature of the campaign, enabling them to seize the initiative, disconcert tribal plans, and avoid the delay inherent in mounting deliberate attacks against strongly defended positions. As a result, columns were able to penetrate deeper into tribal territory before they had to return to the security of a perimeter camp each night. During the operations around Ghalani, for example, Indian troops operated in the distant Toriatigga Valley and could still return to the main perimeter camp. Similarly terrain features around the Nahakki gorge were occupied before dawn on 18th September enabling troops to seize the pass and then construct a new perimeter camp on the Kamalai Plain before nightfall.[75]

New equipment was also deployed for the first time in frontier warfare during the Mohmand Campaign. A single tractor-drawn battery of medium artillery supplemented the mountain artillery, whose longer ranged and more powerful 18lb guns were able to support several Indian columns from a central position. Throughout the campaign a single company of Mk II light tanks worked in close co-operation with the 18th King Edward's Own Cavalry as mobile troops. They proved highly effective, refuting claims that tanks would be ineffectual in mountain warfare. Tribal opposition was materially reduced by light tanks acting as mobile machine-gun posts in support of infantry. Their invulnerability to rifle fire and cross-country mobility quickened the pace of operations as tanks could easily advance through tribal positions and force the defenders to withdraw by firing on the rear and flanks and threatening the opposition's line of retreat. During the advance to Dand on 23rd August they acted as advance guard troops supporting the posting of piquets by advancing

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[75] Official History 1920-1935, p.240-1

through tribal positions and delivering fire from the rear on occupied hills and ridges. Light tanks also successfully covered the withdrawal of Indian columns operating in the Toriatigga Valley on 14th September and on the Nahakki Plain, pinning down pursuing tribesmen with their machine guns until the infantry had rejoined the main body. Additionally, infantry officers employed light tanks for reconnaissance purposes to carry out personal examination of routes used for larger operations. The terrain in the open valleys of Mohmand country did not present any serious obstacle, although cavalry was used to reconnoitre the ground and engineers had to construct tank crossings over nullahs and improve the track across the Nahakki Pass. An attempt by the tribesmen to impede the movement of tanks by digging pits and strewing the roads with rocks and boulders had little effect.[76]

The infantry brigades deployed in Mohmand country were heavily dependent on large quantities of support units throughout the fighting. A large number of non-combatant signals, field ambulances, engineer parks, ordnance depots and motor vehicles accompanied 'Mohforce' severely complicating the tactical and administrative conduct of the operation. To encompass the large number of vulnerable vehicles and non-combatant troops in Mohmand country, perimeter camps grew in size and complexity. Their construction was time consuming and required a considerable amount of labour, and it often proved difficult to find a flat space large enough for all troops and equipment. A large number of troops were required for their defence, moreover, but as the proportion of infantry to other arms had fallen it was often difficult to provide sufficient manpower.[77] Such large encampments proved vulnerable to the carefully organised sniping employed by the Mohmands to harass Indian troops during the campaign. Ambushes were successfully employed on several occasions to counter large parties of tribesmen operating in the surrounding hills at night. During the night of 18th September, for example, the 1/14th Punjab Regiment staged a series of ambushes around Wucha Jawar camp, which killed or wounded seven tribesmen and stopped further

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[76] Lt.-Col. L. Lawrence-Smith, 'Cavalry and Tanks with Mohforce, 1935', C.J., 26, (1936), pp.552-61, Official History 1920-1935, pp.243-4 and Jacobson, op cit, p.80

[77] "Shpagwishtama", 'The Changing Aspect of Operations on the North-West Frontier', J.U.S.I.I., 66, 283, (1936), pp.102-10

sniping.[78] A heavy consumption of small arms and artillery ammunition made it vital to maintain and protect a permanent line of communication along the Gandab Road to service growing logistical requirements, facilitate the movement of reinforcements and evacuate casualties. Engineers and contract tribal labour constructed a water pipe line and a track fit for motor transport along nullah beds from the main road, as Indian troops advanced deeper into tribal territory and later over the Nahakki Pass.[79] A large number of motor vehicles carried ammunition, supplies and water each day along the track to a roadhead from where pack transport carried it to the forward troops. Captain L.R. Hall described the situation shortly before the advance across the Nahakki Pass: 'The nala bed had the appearance of a busy London street during a traffic block, and the supply convoy was to arrive in a short time. It was fortunate that the enemy was not equipped with artillery, or worse still bombing aeroplanes.'[80]

The protection of the lines of communication assumed growing importance as dependence on support units increased, leading to several important modifications in existing tactical methods and the deployment of large numbers of troops. Armoured cars regularly patrolled the Gandab road, but the burden of protection, as always, fell on the infantry. Permanent piquets were constructed in the Karappa Pass, but the intricate and relatively low-lying land between Kialgai and Karappa lacked terrain features that afforded a field of vision and fire. Nowshera Brigade and 3rd (Jhelum) Brigade adopted a system based on mobility and offensive defence which employed lightly equipped fighting patrols, with a strength of 1-2 platoons, who operated between strong posts constructed on either side of the road. A sweep of the complete sector was made before the road was opened to traffic each day, during which all positions from where rifle fire could be opened on the column, were carefully searched. The system proved successful, indicating that well trained and lightly equipped troops could beat the tribesmen at their own game.[81]

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[78] Maj. J.D. Shapland,'North-West Frontier Operations - Sept/Oct, 1935.', J.R.A., 64, 2, (1937-8), pp.209-10 and Col. P. Morison,'Service Milestones', n.d. Morison Mss, Mss.Eur.D.1175/2

[79] "Commenger", 'Engineer Work in the Mohmand Operations', R.E.J., 51, pp.507-22

[80] Capt. L.R. Hall,"Mohforce Signals in the Nahakki Operation', J.U.S.I.I, 66, 283, p.151

[81] Shapland, op cit, p.208 and Official History, 1920-1935, p.244

The Loe Agra and Mohmand operations demonstrated that major changes had occurred in both the tactical and administrative conduct of hill warfare. Despite the 'regrettable' incident at Point 4080 the a day before the tribesmen sued for peace when two platoons of the 5/12th Frontier Force Regiment were overrun by a Mohmand lashkar, the tribesmen had been unable to offer serious resistance to imperial columns. During 1936 the lessons learnt regarding night operations, light tanks, armoured cars and the protection of the lines of communication were closely studied by the General Staff and laid down in the annual report on collective training which the Commander-in-Chief ordered units throughout India to adopt.[82] Indeed, the operations provided sufficient practical experience of the impact of changes in the tactics, training, organisation and equipment on the conduct of hill warfare to prompt the military authorities to begin preparation of a replacement for *The Manual of Operations on the North-West Frontier* which was becoming out-dated. Training was also facilitated by a new unofficial text-book, which provided a series of sand table exercises intended to teach elementary routine and tactics in mountain warfare specifically aimed at units about to serve on the North-West Frontier.[83] During the course of the collective training season and minor operations associated with the watch and ward of the administrative border, further lessons were learnt regarding the use of new equipment on the North-West Frontier. The biennial relief of Chitral in September 1936 was carried out with a motor transport convoy escorted by armoured cars and light tanks, while Bomber Transport aircraft carried two companies directly to the garrison.[84]

The improvement in relations between the Indian Army and the R.A.F. in India, following the appointment of Air Marshal E. Ludlow-Hewitt as A.O.C. in India in 1935, had important implications for co-operation between the two services in frontier warfare at the tactical level.[85] In April 1935 the Air Staff in India issued instructions that all R.A.F. training henceforth should be directed

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[82] A.H.Q. India Training Memorandum No. 12 Collective Training period 1935=36 (Dehli, 1936), pp.2-8 L/MIL/17/5/2199

[83] Maj. D.B. Mackenzie, Mountain Warfare on the Sand Model, (Aldershot, 1936) and R.L.G.,'Reviews - Mountain Warfare on the Sand Model by Major D.B. Mackenzie', J.U.S.I.I., 66, 284, (1936), p.307

[84] Review of Important Military Events in India No. 4 of 1936, 12th Nov. 1936, L/MIL/7/12492 and Smyth, op cit, p.105

[85] D.J. Waldie, Relations between the Army and the Royal Air Force, (London, D.Phil., 1980), pp.210-11 and Ludlow-Hewitt to Chetwode, 28th June 1935, Bartholomew Mss, L.H.C.M.A. 2/1/13

solely towards efficiency in tribal warfare. This decision strengthened Wing Commander J. Slessor's growing conviction that it was time for a radical change in the system of army co-operation in India as the existing 'Aldershot model' devised for conventional European warfare, had proved ineffective in mountainous terrain.[86] The highly effective close-support methods developed in Waziristan between 1920-24 had been largely forgotten as R.A.F. Army Co-operation squadrons concentrated on reconnaissance and directing artillery fire. Indeed, close support was regarded by many senior R.A.F. officers as a last resort and a misuse of valuable aircraft.[87] A series of exercises had already been carried out in April 1935 by No. 3 (Indian) Wing with the Fort Sandeman mobile column at Quetta, in an endeavour to determine principles to guide future training and a suitable method of communication between ground and air. However, the Quetta earthquake prevented further trials until the squadrons reformed at Chaklala in the northern Punjab.[88] During the Mohmand Campaign a significant improvement in co-operation between the two services was evident, adding greater impetus to these experiments. Although aircraft from No. 1 and 2 (Indian) Wings primarily conducted independent bombing operations against tribal villages in accordance with its doctrine of air control, No. 20 (A.C.) Squadron carried out reconnaissance sorties, directed artillery and intervened on the battlefield on several occasions. Indeed the latter proved of growing importance in light of the skill with which the tribesmen sited sangars carefully defiladed from artillery, machine gun and small arms fire.[89] Wing Commander J.C. Slessor, tasked with training in army co-operation throughout India, was finally able to ensure that greater attention was devoted to instruction in close-support and co-operation in mountain warfare, after Northern Command was allocated sufficient Army Co-operation squadrons during 1936 to carry out

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[86] Slessor to Sutton 15th April 1935, Slessor Mss, AC 75/28/28, Air Chief Marshal Sir J. Slessor, The Central Blue: Recollections and Reflections, (London, 1956), pp.121-3 and Air Staff (India) Memo No. 1, April 1935: Tactical Methods of Conducting Air Operations against Tribes on the North-West Frontier of India, 17th May 1935, Bottomley Mss, B22

[87] Sir J. Slessor, These Remain. A Personal Anthology, (London, 1969), pp.118-20

[88] H.Q. No. 3 (Indian) Wing, R.A.F to H.Q., R.A.F India, 17th May 1935, Slessor Mss, AC 75/28/28

[89] Report on the Mohmand Operations, 28th Nov. 1935, p.28 L/MIL/7/16968

intensive training.[90] Writing to Air Commodore R.H. Peck in June 1936, Slessor urged that the proposed new training manual being prepared should deal fully with air co-operation and close-support in mountain warfare, and that it should form part of the forthcoming training season with the army:

> The great cry now-a-days seems to be co-operation - the balanced use of all arms and Services in Frontier warfare. I see the late Chief has been paying tribute… to the effectiveness of air co-operation on the Frontier. I should have thought there could be no better way of ensuring that good co-operation than by having a combined manual on which we all work, containing the description of all methods of Frontier warfare.[91]

T.E.W.T.s were held for officers under his command near Rawalpindi during the summer to demonstrate the effectiveness of close air support and study the inherent problems from the viewpoint of ground troops, while the Vickers-Bomb-Lewis (V.B.L.) method of ground attack was developed by No. 20 (A.C.) Squadron at Peshawar to enable aircraft to engage tribesmen in contact with or near Indian columns. Several pilots were also attached to army units to gain an insight into the problems involved from their perspective, one of whom had been directly involved in fighting in Waziristan. Both the A.O.C. in India and A.H.Q. agreed that close air support in mountain warfare should form an element of collective training during the cold weather. 2nd (Rawalpindi) Brigade and aircraft from No. 3 (Indian) Wing took part in a large combined exercise at Khanpur staged by Northern Command between 17th and 25th November 1936, to both develop and test close air support tactics in mountain warfare, based on a provisional close-support manual written by Slessor and a draft of the new frontier warfare manual.[92] These manoeuvres, simulating tribal opposition to an Indian column engaged in road construction, provided valuable guidance regarding the practicalities of close-support and indicated the importance of R.A.F. liaison officers at

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[90] Secretary to the Government of India (Army Department Air Force Branch) to the Secretary, Military Department, India Office, 10th March 1936, and 20th Aug. 1936, L/MIL/7/19307

[91] Slessor to Peck, 10th April 1936, Slessor Mss, AC 75/28/28

[92] 'Close Support Tactics. Provisional', 1936, Slessor Mss, AC 75/28/30

column headquarters to observe and direct operations, as well as an effective means of inter-communication between the aircraft and forward troops and between columns and airfields. It was essential that the infantry should indicate targets to pilots who otherwise were normally unable to locate tribesmen exploiting the scrub-covered mountainous terrain for cover. A final report on the exercise concluded: 'We consider that the experience of this training gives added reason to believe that, with further combined training of troops on the ground and aircraft in the air, close support in mountain warfare may be very effective in helping to overcome opposition, in reducing casualties to our own troops and in helping to speed up their movement. And the crux of the whole matter is effective communications.'[93]

The Waziristan Military District provided the Indian Army and R.A.F. with an immediate opportunity to test the effectiveness of their new tactics and system of training in November 1936, when the Tochi Column ('Tocol') and the Razmak Column ('Razcol') conducted 'flag marches' in the Khaisora Valley. Razcol encountered unexpected resistance from Tori Khel Wazir tribesmen, incited by the Faqir of Ipi, hidden on the scrub-covered hillsides as it advanced on 25th November, despite assurances from the political authorities that they were peaceful, and lost 14 dead and 43 wounded by the time it reached camp at Bischhe Kaskai. When Tocol crossed the Katira River it was also held up by heavy sniping from positions on both sides of the valley. A cavalry charge and close air support enabled it to reach the Jaler Algad by dusk, after which Brigadier F.H. Maynard decided to continue onwards during darkness to rendezvous with Razcol. Heavy rifle fire stampeded its pack mules, forcing the column to halt benighted 3 1/2 miles from Razcol and construct a perimeter camp. Four tons of ammunition and supplies were dropped by parachute to the embattled troops which successfully joined the other column the following day after further fighting.[94] A combination of a lack of artillery, insufficient infantry strength and the excessive length of the day's march Tocol had attempted during the short November day had

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[93] Combined Report on Air Co-operation Training 2 (Rawalpindi) Infantry Brigade and 3 (Indian) Wing, R.A.F., Khanpur Area 17-25 November 1936.', Slessor Mss, AC 75/28/30

[94] Official History of the Operations on the N.W. Frontier of India, 1936-7, (Dehli, 1943), pp.5-16 L/MIL/17/13/42 (Hereafter Official History 1936-37) and Report on the Operations in Waziristan 25th November 1936 to 16th January, 1937 (First Phase), 21st June 1937, L/MIL/7/16971

played directly into tribal hands. As a result of the hitherto comparatively peaceful conditions in the area, its commander had attempted a longer march than was compatible with the principle of security, without adequately piqueting the route or allowing sufficient time to construct a perimeter camp while reducing the number of machine guns carried to provide more transport for supplies.[95] Moreover as Colonel H. Pettigrew later observed: 'The main cause of the semi-disaster was nearly all the troops in Tocol were new to the Frontier, doing their first year in Bannu or Mir Ali. In this alone lay the fault, and the lesson. That with a column of only two battalions of infantry, with some horsed cavalry and mountain guns and the usual services, one of the two battalions should always be a seasoned one until the newcomers had been on at least two columns.'[96] The 3/7th Dogras, for example, had arrived in Waziristan from Burma in March 1936 and had been hurriedly introduced to frontier warfare at Kurramgarhi during the previous 'cold weather.'[97]

The Waziristan Military District was immediately reinforced by 2nd (Rawalpindi) Brigade, 11th Light Tank Company, armoured cars, artillery and two additional infantry battalions ('Khaicol') along with aircraft from No. 3 (Indian) Wing to prevent unrest spreading, to punish the Tori Khel Wazirs and to construct a road from Mir Ali through the Khaisora Valley to facilitate control of the area. General Sir J.D. Coleridge, G.O.C. Northern Command, was given full authority for the control of land operations, aided by the local Civil Armed Forces, and independent air operations. The rapid concentration of imperial troops and the construction of a new road during December and January from Mir Ali into the Khaisora Valley, under close military protection, successfully localised tribal unrest. Khaicol encountered little opposition during the slow and deliberate advance, apart from intermittent long range sniping and during the withdrawal of 2nd (Rawalpindi) Brigade to camp on 22nd December. After the road had been completed, buildings belonging to identified hostile tribesmen were destroyed. A senior R.A.F. officer attached to the H.Q. of Wazirforce facilitated close co-operation

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[95] Prendergast, op cit, p.86
[96] Pettigrew, op cit. p.89
[97] C.T. Atkinson, A History of the 1st (P.W.O.) Battalion the Dogra Regiment, (Southampton, 1950), pp.123-5, and Trench, op cit, pp.126-7

between the two services during the operation, although offensive operations by aircraft were restricted to a proscribed area five miles in advance and on the flanks of the Indian column whose primary task was to protect the technical troops engaged in road construction. In January hostile Afghan tribesmen were expelled across the Durand Line by imperial troops after the Faqir's headquarters at Arsal Kot was destroyed. The Tori Khel Wazirs finally submitted on 15th January 1937 and the area reverted to civil control; after operations that had cost the Indian Army 34 dead and 132 wounded.[98]

During the spring the situation deteriorated after a series of offences were committed by hostile tribesmen in Northern Waziristan while raids were mounted in the Derajat. A combination of political pressure, limited punitive bombing and proscription by aircraft of certain areas, believed to be harbouring the Faqir, failed to restore order. Piquets and posts throughout Waziristan were sniped and bridges, culverts and telephone lines damaged by small bands of hostile tribesmen. The H.Q. of 1st (Rawalpindi) Division, 1st (Abbottabad) Brigade and 3rd (Jhelum) Brigade reinforced the garrison, but these troops were immediately tied down in ensuring their own protection and in safeguarding the Bannu-Razmak road after local Khassadars became unreliable. This period of relative calm before the storm, however, allowed relatively inexperienced and untrained British units to be instructed before embarking on active operations. Instruction in mountain warfare given to the 1st Battalion Northamptonshire Regiment, for example, had been limited to six weeks at Hoshiapur each year, and its officers knew little of earlier campaigns in Waziristan or of their Pathan adversary when they were deployed.[99] When the 1st Battalion South Wales Borderers was deployed as part of 1st (Abbottabad) Infantry Brigade, Brigadier R.I. Inskip personally supervised intensive instruction at Mir Ali in advance guard duties, piqueting, and constructing a perimeter camp, especially with regard to the training of junior leaders, complementing that received earlier at Abbottabad in mountain

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[98] Report on the Operations in Waziristan 25th November 1936 to 16th January, 1937 (First Phase), 21st June 1937, L/MIL/7/16971, Operations in Waziristan, 24th November 1936 to 15th January 1937, Jan. 1937, Slessor Mss, AC 75/28/30 and Col. R.L. Bond,'The Khaisora Road,' R.E.J. 52 (1938), pp.190-203

[99] G. Moore, "Just as Good as the Rest" A British Battalion in the Faqir of Ipi's War Indian N.W.F. 1936-37, (Huntingdon, 1979), p.10 and p.42

warfare.[100] Imperial troops remained on the defensive during the spring while permanent piquets were constructed to secure the roads on which they depended. A separate tiring and time consuming road-opening operation was required each day to establish control along the lines of communication from perimeter camps located in each sector. A camp piquet at Damdil was attacked on the night of 20th/21st March by Tori Khel Wazir tribesmen armed with rifles and hand grenades. Hand-to-hand fighting occurred when the position was rushed by swordsmen during which two sepoys were killed and eight wounded before the attack was repulsed. On 29th March 1937 the advance guard of the 1st (Abbottabad) Brigade, guarding the route between Dosalli and Damdil, was attacked by 700-1,000 tribesmen who, hidden amongst scrub and nullahs alongside the road, opened heavy rifle fire while swordsmen closed and engaged in hand-to-hand combat. Armoured cars, artillery and aircraft supported the hard pressed 1/6th Gurkha Rifles, dislodging the tribesmen later during the day, inflicting an estimated 94 killed and 64 wounded on the withdrawing lashkar.[101] The strength of the 'hostile' lashkar grew steadily during the summer to over 4,000 men, composed of Tori Khel Wazirs, a large number of Afghan tribesmen and a handful of individuals drawn from otherwise peaceful sections.[102] Frequent raids were carried out into the settled districts; camps and piquets were sniped and bridges, culverts and telephone lines were damaged by tribal gangs. However, only a small proportion of tribal fighting strength was involved, with the lashkar composed of a fluctuating collection of individuals from various tribes and sections rather than complete tribal units.[103]

The length of the lines of communication throughout Waziristan and the paucity of troops meant it was impossible to prevent successful small-scale tribal attacks against troops tied down in purely defensive duties. An attack on a convoy moving through the Shahur Tangi gorge in Southern Waziristan in April 1937, by a mixed Mahsud and Bhittani gang, strikingly demonstrated the vulnerability

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[100] Lt.-Col. G.A. Brett, History of the South Wales Borderers and the Monmouthshire Regiment, 1937-1952 Part 1, (Pontypool, 1953), p.13 and Maj.-Gen. A.E. Williams,'Waziristan 1937', n.d. Williams Mss, I.W.M. 88/56/1

[101] 'Action of the 1st (Abbottabad) Infantry Brigade Near Damdil, 29th March 1937', J.U.S.I.I., 68, 290, (1938), pp.33-8

[102] M.O.3 Unofficial Letter on Afghanistan and the North-West Frontier of India, 1st April 1936-March 31st 1937, (Simla, 1937), p.19 L/WS/1/192

[103] Report on the Administration of the Border of the North-West Frontier Province for the Year 1936=37, (Dehli, 1937), pp.1-2 L/P&S/12/3148

of motor transport convoys. After the soft-skinned lorries at the head and tail of the column were destroyed the convoy was penned in the defile, where its escort of four armoured cars were unable to elevate their machine guns sufficiently to engage the tribesmen on the heights above and the infantry escort was pinned down by intense rifle fire.[104] All Government convoys ceased in Waziristan after the incident except on roads protected by troops. Between April and early December the Bannu-Wana road remained closed and the isolated garrison at Wana was maintained by the Mahsud-owned Bagai Company, operating its lorries under tribal protection, and a flight of Bomber Transport Aircraft which flew in ammunition, supplies and relief troops. A 46 mile stretch of road between Bannu and Damdil was protected by the 1st Division, whose troops were deployed in permanent piquets supplemented by daily patrols of infantry and armoured cars supported by artillery and aircraft. Although effective, these defensive arrangements reduced the number of troops free for offensive operations.[105] Armoured car patrols replaced infantry detachments escorting convoys in May after it became apparent that their rifles offered too tempting and valuable a target for the tribesmen. Even so, movement of convoys and troops was restricted to specific 'Road Open Days' that required a major tactical operation starting from a perimeter camp located in each sector of the line of communications. The hostile tribesmen, intermingled with the peaceful population, placed a constant strain on troops operating in Waziristan, and ensured that full military precautions had to be observed at all times by soldiers on monotonous 'Road Protection' (R.P.) duty. John Masters, serving with the 2/3rd Gurkha Rifles, observed:

> This was the hardest task the Frontier offered, and we did it three times a week… R.P. was hard because every day we had to cover the same stretch of road, and every day it became more difficult to obey the Cardinal Frontier principle of never

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[104] Anon.,'Attack on the Convoy at Shahur Tangi on the 9th April 1937', J.U.S.I.I., 67, 288, (1937), pp.261-65, and Lt.-Col. J.A. Bolam,'The Shahur Tangi Affair', nd., Bolam Mss, Mss.Eur.C.308

[105] Report by the Commander-in-Chief in India on the operations carried out in Waziristan between 16th January 1937 and the 15th September 1937 (Second Phase), 24th Nov. 1937, L/MIL/7/16971, and M.I. Unofficial Letter on Afghanistan and the North-West Frontier of India, April 1937 to March 1938, (Simla, 1938), pp.18-19 L/WS/1/192

> doing the same thing in the same way twice running. We had to fight against fatigue and carelessness, because someone was watching. Someone was always watching - someone with an inborn tactical sense, someone who missed nothing.[106]

Those British and Indian regiments unwilling to maintain a high standard of vigilance paid the price in casualties from hostile tribesmen carefully watching their positions. Even more galling were the political restrictions imposed on engaging armed local tribesmen until they definitely committed a 'hostile' act. These were an unwelcome surprise to regimental officers unacquainted with the basis of British policy in Waziristan. Not surprisingly some did not obey such restrictions and meted out exemplary punishment to tribesmen suspected of firing upon Indian columns or having killed or mutilated imperial dead and wounded.[107]

The Waziristan Military District was placed once again under the direct control of General J.D. Coleridge on 22nd April 1936, after political pressure and limited punitive and proscriptive bombing failed to restore order, with orders to restore peaceful conditions throughout the area. 2nd (Rawalpindi) Brigade, 9th (Jhansi) Brigade and two battalions from 7th (Dehra Dunn) Brigade reinforced the garrison from the Field Army. 1st (Rawalpindi) Division commenced offensive operations on 23rd April 1937, intended to bring hostile tribesmen assembled in the Khaisora and Shaktu areas to battle over ground chosen to facilitate the use of all arms. 2nd (Rawalpindi) Brigade was augmented by four batteries of mountain artillery, light tanks and a R.A.F. Army Co-operation squadron, along with additional troops for the protection of its lines of communication. The brigade advanced from Mir Ali on 23rd April into the Khaisora Valley, but were unable to bring the elusive hostile lashkar to battle. The camp piquets surrounding Bische Kashkai perimeter camp in the Khaisora Valley however, were heavily sniped and bombed on the night of 27th April by Tori Khel tribesmen. A determined lashkar simultaneously attacked the main encampment, reaching within 20 yards of the perimeter wall before being repulsed

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[106] J. Masters, Bugles and a Tiger (London, 1956), p.222

[107] Ibid, pp.208-9 and Lt.-Gen. F.I.S. Tuker, 'Frontier 1937', nd, p.7 Tuker Mss, I.W.M. 71/21/5/10

with heavy losses by concentrated machine gun and rifle fire. As one officer observed:

> Thus ended an experience which in all recent history of frontier warfare is probably unique. Picquets and isolated detachments had often been attacked at night, and will probably continue to be on future occasions as long as the tribesman is what he is; but never before has an attack on so large a scale been made on a strongly defended camp bristling with automatic weapons and manned by some 3,000 men. One cannot believe that is ever likely again.[108]

Two days' later the lashkar was lured out from the cover of rocks and bush, where aircraft, 3.7" howitzers and machine gun fire inflicted heavy casualties. Despite the heavy punishment inflicted on the lashkar the operations were indecisive as the Faqir of Ipi and the main body withdrew to the Shaktu Valley where it increased in strength during the summer.[109]

The Waziristan Division ('Wazdiv'), composed of elements of the local garrison, concentrated near Dosalli in May to strike against hostile Tori Khel lashkars operating in the Shaktu area and open communications with the garrison at Razmak. In an endeavour to avoid the strongly fortified Sre Mela Gorge, which blocked an advance towards the Sham Plain, Bannu Brigade broke with the established doctrine of frontier warfare. During the night of 11th-12th May 1937 Bannu Brigade, led by 8 platoons of Tochi Scouts, slowly advanced over the 2,000 foot knife-edged Iblanke Ridge bypassing the gorge and reached the Sham Plain virtually unopposed. 1st (Abbottabad) Brigade simultaneously launched a converging attack which secured a foothold in the Sre Mela gorge with few losses and the retreating lashkar suffered heavy casualties from aircraft as they withdrew across the Sham Plain. Many dispirited tribesmen dispersed including most of an Afghan contingent which had suffered heavy losses as they were not so well acquainted with Indian tactics as the local tribesmen.[110] 13,000

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[108] Maj. D.A. Mackenzie, 'Operations in the Lower Khaisora Valley, Waziristan, in 1937", J.R.U.S.I., 82, 528, (1937), p.814

[109] M.I. Unofficial Letter on Afghanistan and the North-West Frontier of India, April 1937 to March 1938, (Simla, 1938), pp.20-1 L/WS/1/192

[110] Maj, W.D. Lentaigne,'"Iblanke" - The Advance to the Sham Plains 11/12th May 1937', J.U.S.I.I., 68, 291, (1938), pp.131-52 and Masters, op cit, pp.234-41

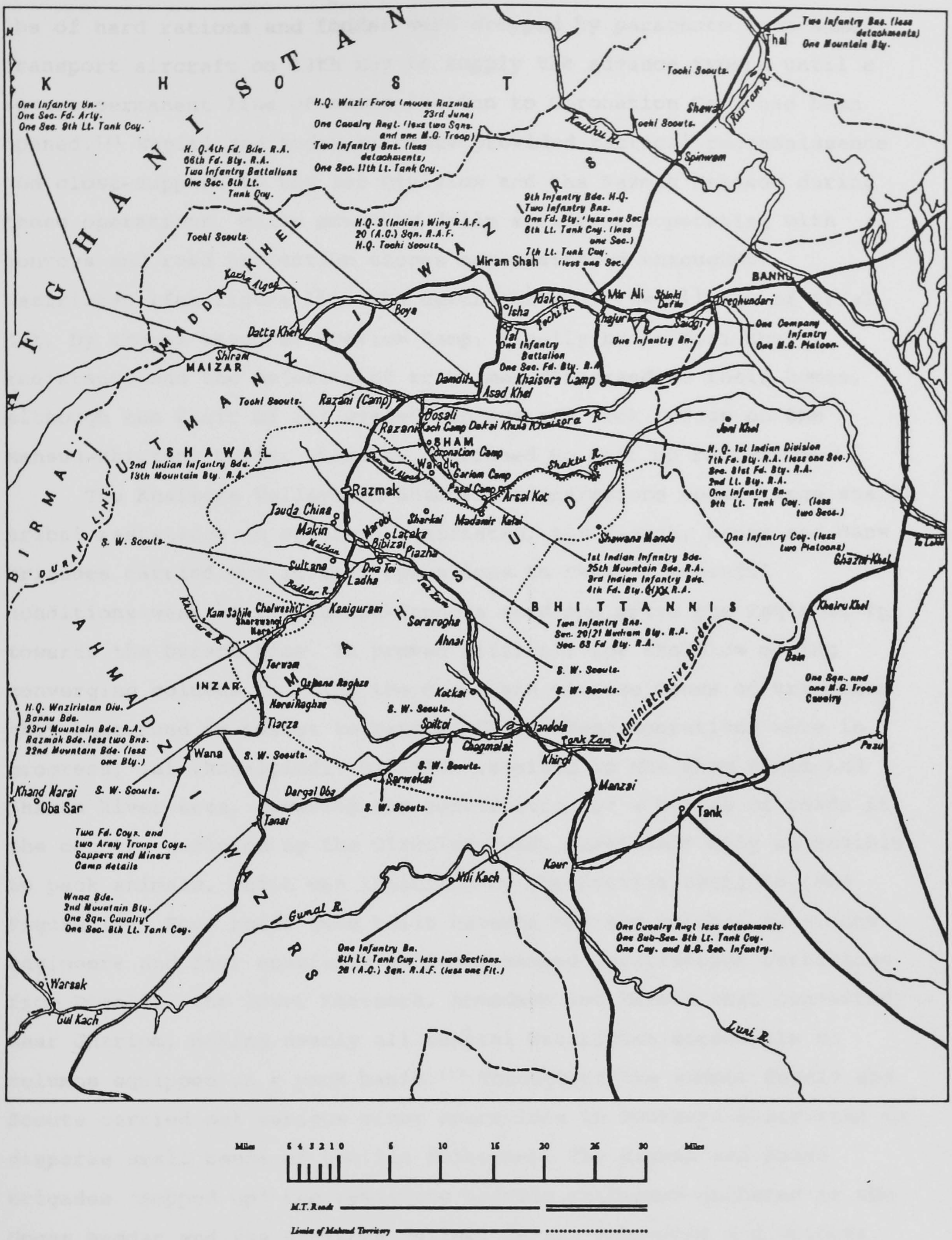

Figure 10. Distribution of British and Indian units in Waziristan Military District, June 1937

lbs of hard rations and fodder were dropped by parachute from Bomber Transport aircraft on 13th May to supply the advance troops until a secure permanent line of communication to Coronation Camp had been opened.[111] Wapiti and Audax aircraft provided tactical reconnaissance and close-support to the 1st Division and the Razmak Brigade during these operations, while mounting daily sorties co-operating with convoys and road protection troops now scattered throughout Waziristan (See Figure 10). The destruction of the village of Arsal Kot, by troops based at Ghariom Camp, finally broke Tori Khel resistance and the majority of tribesmen dispersed to their homes, although the Faqir of Ipi evaded capture and took refuge on the Mahsud-Bhittani border where he continued to stir up resistance.[112]

The Khaisora Valley and Sham Plain operations ended large scale tribal resistance in Northern Waziristan, but Razmak, Bannu and Wana brigades carried out further operations to restore peaceful conditions west of the Razmak-Jandola road and drive the Faqir of Ipi towards the Durand Line. It proved difficult for the slow moving converging columns to bring the small and elusive bands of tribesmen that continued to resist to battle. While these operations were in progress, 1st (Rawalpindi) Division remained in the Sham Plain and Shaktu River area, covering the construction of a system of roads in the country enclosed by the Circular Road, previously only accessible to pack animals, which was inhabited by the hostile sections (See Figure 11). Four roads were built between May and October by troops, engineers and four specially enlisted Mahsud construction battalions from Dosalli, the lower Khaisora, Ahmedwam and Razmak that connected near Ghariom, making nearly all central Waziristan accessible to columns equipped on a pack basis.[113] Throughout the summer Wazdiv and Scouts carried out various minor operations in Southern Waziristan to disperse small bands of hostile tribesmen. The Razmak and Bannu brigades 'mopped up' the remaining hostile tribesmen gathered in the Upper Baddar and the Khaisora valleys during September and October, destroying villages belonging to those tribesmen implicated in raids.

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[111] Supplement No. 3 to Monthly Intelligence Summary No. 5 on Events in Waziristan from 12th to 19th May 1937, 22nd May 1937, App. A L/MIL/5/1065 and M.F. Kemmis Betty, 'Waziristan, 1937', in MacFetridge and Warren, op cit, p.118

[112] Report by His Excellency the Commander-in-Chief in India on the operations carried out in Waziristan between the 16th January 1937 and the 15th September 1937 (Second Phase), 24th Nov. 1937, L/MIL/7/16971

[113] Maj. A.E. Armstrong,'More Roads (Waziristan, 1937)', R.E.J., 53, (1939), pp.1-16 and Lt.-Col. W.R. Penny,'Waziristan 1937', R.S.Q.J., 7, (1939-40), pp.43-62

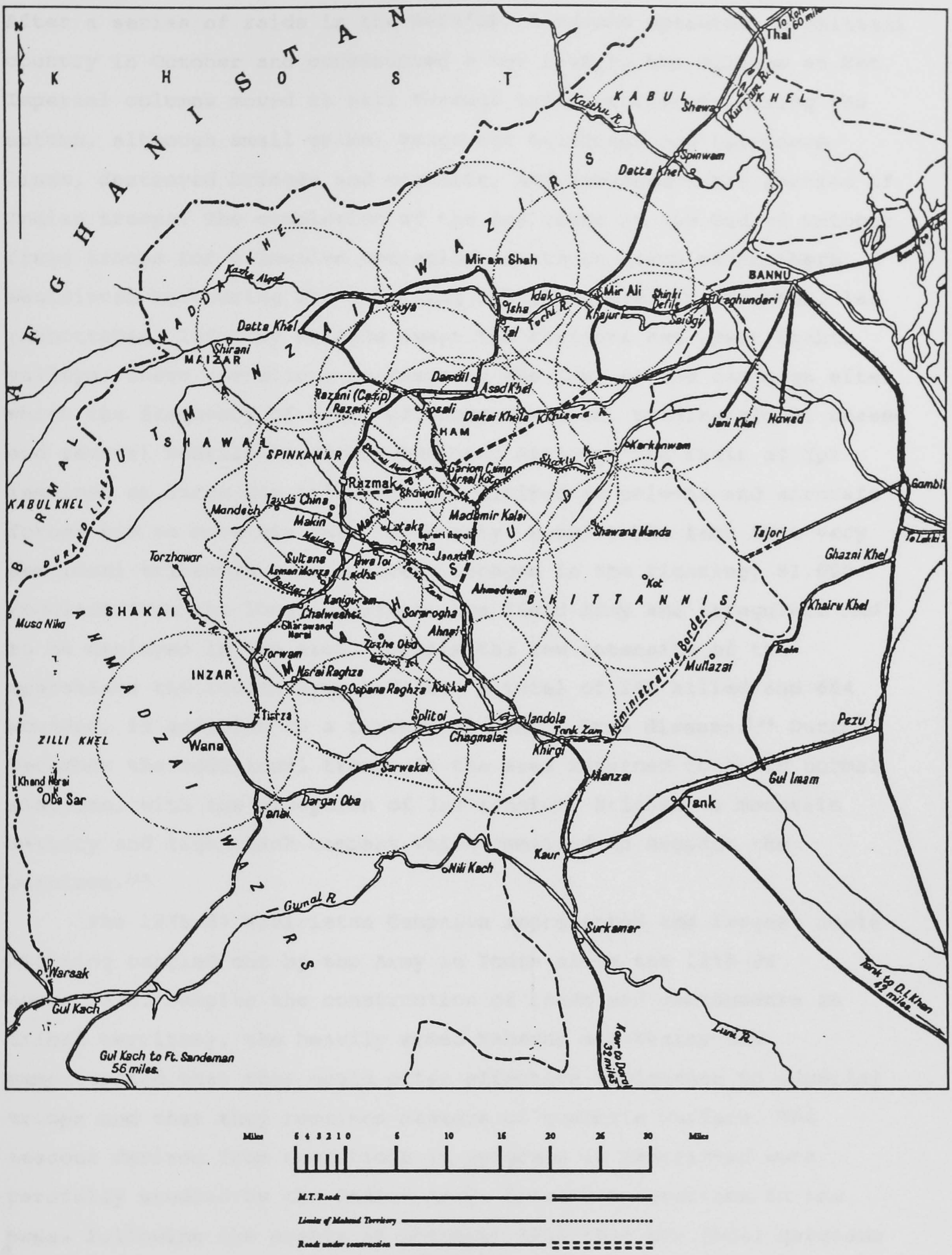

Figure 11. The road network on Waziristan Military District, October 1937

Note: Circles denote 10 mile (2 day) radius of action of Light Pack Transport columns operating from a roadhead.

After a series of raids in the Derajat, a column operated in Bhittani country in October and constructed a new road to the village at Kot. Imperial columns moved at will through tribal territory during the autumn, although small tribal gangs cut telegraph and telephone lines, destroyed bridges and culverts, and ambushed small parties of Indian troops. The completion of the new roads at the end of October freed troops for offensive operations in those parts of northern Waziristan harbouring the remaining hostile gangs. In November, 1st (Abbottabad) Infantry Brigade swept the Khaisora and Lower Shaktu valleys. These operations represented the last of the campaign after which the frequency of minor offences declined, raiding almost ceased and several hostile leaders submitted. Although the Faqir of Ipi remained at large his influence was limited as columns and aircraft forced him to move his base repeatedly. Despite the fact that very few local tribesmen were actively engaged in the fighting, 61,000 regulars from the local garrison, the Field Army and irregulars had to be deployed in the area. Despite the low intensity of the operations the Indian Army had lost a total of 245 killed and 684 wounded, in addition to a further 73 deaths from disease.[114] During December the additional troops in the area returned to their normal stations, with the exception of 3rd (Jhelum) Brigade, a mountain battery and light tank company which remained to support the garrison.[115]

The 1936-37 Waziristan Campaign represented the largest scale fighting carried out by the Army in India since the 1919-24 operations. Despite the construction of roads and cantonments in tribal territory, the heavily armed Mahsuds and Wazirs had demonstrated that they could offer effective resistance to imperial troops and that they remained masters of guerilla warfare. The lessons derived from operations in progress in Waziristan were carefully studied by the Indian Army. Initial accusations in the press following the events of November 1936 that the local garrison was untrained in frontier warfare, were simply unfounded as most Indian regiments contained officers and men with prior practical experience of the frontier, while instruction and practice in

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[114] Official History 1936-37, p.229

[115] Report by His Excellency the Commander-in-Chief in India on the operations carried out in Waziristan (Final Phase) between the 16th September 1937 and the 15th December 1937', 14th April 1938, L/MIL/7/16971

frontier warfare formed part of normal annual training of all units.[116] The fighting generally confirmed the lessons learnt during the Mohmand operations, indicating that the principles on which tactics and training for frontier warfare were based in India were generally sound and that there was no need for a major change in imperial tactics. A high standard of specialised training was required amongst imperial troops. Those units that neglected the 'laws' or principles of frontier warfare or were unwilling to maintain vigilance suffered at the hands of the ever present tribesmen. The fighting in Waziristan also provided further important practical experience regarding the use of light tanks, medium artillery and aircraft in frontier warfare, although infantry remained the predominant arm in tribal territory. Operations had been divided into two main categories: operations by columns operating in rugged, mountainous areas and those associated with road protection along the extended lines of communication of Wazirforce.

The infantryman and the pack mule remained the key to all operations in difficult mountainous terrain impassable to wheeled transport and where there was limited scope for tracked vehicles. The Khaisora operations in November 1936 graphically demonstrated that the maximum distance a fully equipped Indian column could march, taking full precautions and allowing sufficient time to establish a perimeter camp before nightfall, was limited to 8-10 miles in the face of active tribal opposition. Despite reductions in their number, the factor which dictated the speed of movement and circuit of action of a column remained the protection of the large quantity of pack transport required to carry supplies, fodder and ammunition. It was only possible to move greater distances, or at a faster rate, by reducing piqueting below an acceptable margin of safety, or by neglecting to provide sufficient supporting artillery and machine gun fire. The price paid by Tocol for attempting a longer march than was compatible with the principle of security, acted as a strong lesson for other commanders. During November it had been impossible for 1st (Abbottabad) Brigade to cover more than 5-6 miles each day during operations in the Lower Shaktu Valley due to the short hours of daylight available, the difficult terrain and the time required for piqueting and the construction of a perimeter camp. Even this

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116 'Editorial', J.U.S.I.I., 67, 288, (1937), pp.238-40

distance was only possible because the transport advanced on a broad front along a nullah bed which meant that only two miles of the route had to be piqueted.[117] The need to pay careful attention to security was driven home during the fighting and was essential to prevent 'regrettable incidents', as hostile tribesmen harassed advancing columns and attacked small detached parties of troops whenever an opportunity arose. It was necessary to piquet all commanding features up to 1,500 yards from the line of march, to protect Indian columns on the move or troops halted at night, from sniping. A full platoon had to be employed in piquets out of direct support in light of growing tribal skill in attacking such positions, which were normally provided with a protective ring of barbed wire to prevent their being rushed. The effectiveness of night operations were also thoroughly vindicated, reducing tribal resistance and increasing mobility in the border hills, but the Khaisora operations had also demonstrated that such manoeuvres had to be carefully planned and possess surprise to prevent imperial columns from falling into disarray. In other respects imperial tactics generally conformed closely to existing methods. The 3.7" howitzer, now equipping all mountain batteries in India, had demonstrated its versatility, mobility and firepower once again and was the only type of heavy support weapon in imperial hands capable of accompanying Indian columns operating in the hills. As one infantry officer observed: 'Of all the ubiques it is undoubtedly the most ubiquitous.'[118] Two companies of Mk II and Mk IIb Light Tanks were employed when ground permitted in sections or sub-sections to carry out reconnaissance, protect flanks, cover withdrawals and directly attack lashkars, adding to the strength and quickening the pace of movement.[119] The weight of firepower provided by machine guns, artillery, light tanks and aircraft operating with Indian columns had proved highly effective against large concentrated lashkars in the opening phases of the operations, but conversely exacerbated the problem of bringing the elusive tribesmen to battle. Moreover, the unrestricted employment of superior firepower with little thought to its long term impact was now a thing of the past, as the political

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[117] Maj. T.H. Angus,'Operations in the Lower Shaktu Valley, 16th/18th November 1937', J.U.S.I.I. 68, 292, (1938), pp.335-42
[118] Mackenzie, op cit, p.821
[119] Gort to Inskip, 29th Dec. 1937, Inskip Mss, I.W.M. INP 1/2, Slessor 1956, op cit, p.131 and Mackenzie, op cit, p.821

restrictions associated with the 'hearts and minds' campaign in Waziristan exerted a powerful influence on the fighting.

The 5,000 strong Tochi and South Waziristan Scouts had complemented the Indian army, carrying out operations independently and in co-operation with regulars throughout Waziristan both with columns and on the lines of communication. Their speed, mobility, light equipment and local knowledge enabled them to carry out advance guard duties, protect the flanks of columns, threaten the flanks and rear of the enemy, to exploit success, ambushes, rounding up of suspected hostile tribesmen and raids with far greater ease than heavily encumbered regulars who were more tied to the roads. However, their organization and light scale of equipment meant they were unable to overcome serious opposition without support from regular troops.[120]

The conduct of military operations by imperial troops was now more than ever dependent on roads, especially for those units drawn from the Field Army. Roads increased the mobility of units in Waziristan and facilitated the supply of imperial columns. Lorries were employed on an unprecedented scale allowing the number of pack animals and non-combatants to be considerably reduced from those needed during prior operations. The circular road allowed lightly equipped imperial troops to concentrate quickly and operate off a secure line of communication, greatly simplifying the whole problem of transport and supply as well as reducing the size and unwieldiness of columns. Lorries delivered troops, pack animals and supplies to the point where columns left the roads, refilled supply echelons and dumped stores at roadheads and were, to that extent, able to increase the radius of action of lightly equipped Indian troops. The construction of further roads during the operations (see Figure 11) allowed motor vehicles to operate in new areas of Waziristan, completing a system whereby the whole of central Waziristan was made accessible to columns operating from a motor transport road on a pack basis with a two-days' radius of action. Roads also allowed heavy weapons to be deployed in Waziristan. Five batteries of mechanised field artillery, as well as a section of the 20/21st Medium Battery,

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[120] Report on the Administration of the Border of the North-West Frontier Province for the Year 1936=37, (Dehli, 1937), p.31, R. Bromhead, 'Trust Begets Trust. The Problem of Waziristan', J.U.S.I.I., 69, 297, (1939), pp.470-1 and Pettigrew, op cit, p.88

equipped with a mixture of 18lb, 4.5" and 6" guns firing a heavier weight of shell than normally used in frontier warfare, were employed in the vicinity of roads to support and columns and road protection troops. Field and medium artillery was kept at locations with a wide arc of fire in order to allow fire to be brought rapidly to bear to support Indian columns and road protection troops. Harassing fire at unexpected intervals, directed by aircraft or registered silently, exerted a powerful moral impact and prevented tribesmen from sheltering in villages at night. However, it proved difficult to maintain communications, between the Forward Observation Officers and batteries since the infantry, accustomed to working with only mountain batteries, found it difficult to work alongside and direct heavy artillery fire.[121]

The main task carried out by the majority of imperial troops deployed in Waziristan was Road Protection along the extended lines of communication.[122] A full infantry brigade was normally still required to piquet 10-12 miles of road with mobile reserves held in each sector ready to respond to tribal raids. The stereotyped procedure that most imperial battalions employed for 'Road Open Days', normally held three days a week, allowed little opportunity for personal initiative or any variation in minor tactics when positions of tactical importance had to be occupied on a daily basis. Most Road Protection schemes employed in Waziristan surrendered the initiative and provided hostile tribesmen an idea of the time, direction, method and destination of each detachment as they piqueted a road each day making them vulnerable to attack. In road protection considerable scope existed for the use of tanks and armoured cars, as well as motorised infantry battalions, which had considerably simplified protection of fast moving convoys of motor transport. Armoured cars proved an effective and economical means of protecting roads, allowing the number of infantry deployed on such exacting duties to be reduced. They escorted convoys, patrolled long stretches of the lines of communications and provided fire support when necessary to road protection troops. On occasion they were supplemented by Light Tanks and improvised home-made armoured

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[121] "Chimariot", 'Mountain Artillery in Frontier Warfare', J.R.A., 65, (1938-39), pp.90-5 and Graham, op cit, p.249

[122] Lt.-Col. F.C. Simpson, 'Review of Frontier Policy from 1849-1939', J.U.S.I.I., 74, 316, (1944), p.307

lorries. Infantry battalions embussed in lorries were also used as mobile columns and transported to the scenes of raids or to reinforce units along routes known to be used by tribal gangs. A clear lesson of the campaign was that, despite the employment of armoured cars, light tanks and lorry-borne infantry escorts, motor transport was highly vulnerable to sniping and ambush in hilly areas outside the security of static protective piquets.[123]

The close co-operation between the R.A.F. and the Indian Army at tactical level, after long years of acrimonious disagreement over air control, was an outstanding feature of the operations in Waziristan. Six squadrons - equipped with Westland Wapiti, Hawker Audax and Hawker Hart aircraft - were used in the largest air operation ever undertaken in India, as well as a flight of the Indian Air Force. Independent bombing operations were carried out by No. 1 and No. 2 (Indian) Wings, operating under the detailed restrictions imposed by the Government of India intended to prevent the death of women or children and attacks on friendly tribal sections. Aircraft carried out punitive bombing raids on houses belonging to those individuals directly implicated in attacks and villages belonging to hostile tribal sections. After warning notices were distributed warning the local inhabitants to evacuate an area large parts of Waziristan were 'proscribed' to disperse hostile tribesmen, prevent a lashkar moving through an area, prevent access to an area of unrest, prevent interference with a line of communication or to reduce opposition to an advancing column or for punitive reasons.[124] Daily reconnaissance sorties were carried out throughout Waziristan and photographic intelligence enabled column commanders to locate hostile lashkars, determine the number and location of piquets and perimeter camps in advance, and to direct long-range artillery fire. An outstanding feature of the operation was the frequent use of Bomber Transport Aircraft to drop supplies to imperial columns and to maintain isolated posts. It increased the administrative mobility and hence the tactical mobility of imperial troops. After four tons of supplies and ammunition were dropped during the Khaisora operations it was proposed that henceforth supply drops of food, fodder and

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[123] C.G. Ogilvie, Secretary to G.O.I. to Secretary Military Department, India Office, 4th Feb. 1938, L/MIL/7/7235 and Jacobson, op cit, pp.81-2

[124] Report on Air operations in Waziristan No. 1 (Indian) Group, 17th February to 7th December 1937, 22nd Dec. 1937, Bottomley Mss, B2304

ammunition should form a normal component of military operations in tribal territory to reduce the amount of pack transport required, remove the need for a permanent line of communication, extend the circuit of action of ground columns and to increase both their speed and mobility. A flight of Vickers Valentia aircraft from No. 70 (Bomber Transport) Squadron in Iraq augmented the flight already in India, carrying military personnel, stores and evacuating seriously wounded to base hospitals in India during the campaign.[125]

The close-support tactics developed at Khanpur by No. 3 (Indian) Wing and 2nd (Rawalpindi) Brigade in November 1936 were thoroughly vindicated during the Khaisora operations, adding a new dimension to the tactical conduct of frontier warfare.[126] They formed an integral part of most operations in Waziristan during 1937 with aircraft from Army Co-operation squadrons using the V.B.L. system of ground attack to engage hostile tribesmen in contact with imperial troops and those advancing or retiring in 'proscribed' areas in advance or along the flanks of imperial columns. The importance of close-support was acknowledged by General Sir J.D. Coleridge, G.O.C. Northern Command, in March 1937: 'These operations have definitely proved the great value which close support by aircraft in mountain warfare can afford, and that this can best be obtained by a column commander having at his side an Air Force commander with whom he can easily and quickly collaborate.'[127] Aircraft constantly patrolled the sides and rear of columns during the day while operations were in progress, ready to take immediate offensive action and, in the process, restricted hostile movement in the area. On several occasions close-support aircraft acted as flank guards or 'high piquets' when columns moved through steep and difficult country that otherwise would have entailed lengthy delays using infantry, even though they could not ensure complete security. The provision of close air support increased the pace of Indian columns and inflicted heavy casualties on tribesmen concentrated to oppose advancing

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[125] Capt. A.V. Brooke-Webb,'Relief by Air', J.R.A., 66, (1939-40), pp.225-8 and Review of Important Military Events in India No. 4 of 1937, 30th Oct. 1937, L/MIL/7/12492

[126] Report on the Operations in the Khaisora-Shaktu area of Waziristan, 25th November 1936 to 25th January 1937, 25th Feb. 1937, Bottomley Mss, B2300 and Mackenzie op cit, p.822

[127] Gen. J.D. Coleridge to C.G.S., 12th March 1937, Rees Mss, Mss.Eur.F.274/4

troops.[128] A senior R.A.F. officer accompanied each column to advise brigade commanders, liaise with units and ensure pilots received all necessary information. As had been anticipated, close communication between pilots and the forward troops was essential. R/T between aircraft and R.A.F. mule-pack sets with column headquarters formed the basis of communication, while a simple 'XVT' 'Close Support Intercommunication Code' developed during the autumn of 1936 supplemented Popham Panels and enabled troops to indicate their position and targets to supporting aircraft.[129] The commander of No. 20 (A.C.) Squadron, later observed:

> If any trouble was suspected, the R.A.F. would keep one or more aircraft over the area throughout the hours of daylight. The support was based on the principle of keeping picket positions under general surveillance, and giving them direct assistance if they needed it. All pickets carried two white ground strips, and whenever they halted they would put these out in the form of an "X" where it could be seen from the air. This showed their exact position. if the picket was under fire, it would put a "V" with the view pointing in the direction of the enemy and there were many times we found the enemy through this help. If the picket were in danger of being overrun, it would use the emergency "T" sign, the short arm being nearest the enemy. There are times when we bombed and shot up the enemy within thirty yards of a picket position. The pilot would mark the picket positions on his map and periodically drop a message on the column headquarters, giving pinpoint map references and stating which were in action.[130]

Despite critics who still regarded such operations as a misuse of valuable aircraft henceforth close air support established itself as a valuable adjunct to all ground operations in tribal territory.

The Waziristan campaign once again demonstrated the necessity of a high standard of specialised training in frontier warfare for British and Indian units stationed in the Covering Troops' districts

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[128] Air Commodore N.H. Bottomley,'The Work of the Royal Air Force on the North-West Frontier', J.R.U.S.I., 84, 535, (1939), pp.775-8

[129] A.I.L.O.,'Close Support by Aircraft on the North West Frontier', J.U.S.I.I., 70, 298, (1940), p.16

[130] Air Marshal Sir B. Embry, Mission Completed, (London, 1957), p.80

and for those elements of the Field Army in Northern Command detailed as immediate reinforcements. The recent lessons learnt in tribal territory were included in reports issued by Northern Command and the annual report on collective training issued during the summer of 1937.[131] Training in frontier warfare was extended during 1936 to form part of the individual and collective training period of every unit and brigade in India. Units of the 1st (Rawalpindi) Division and those stationed in Lahore District, tasked to reinforce the Covering Troops on mobilisation, were also temporarily attached to columns operating in tribal territory to gain practical experience. Such training had immediate relevance as an estimated 200 'irreconcilable' tribesmen remained hostile and continued to snipe troops, sabotage roads, hold up traffic and cut telegraph lines in Waziristan during 1938 and 1939, as well as carrying out raids in the Derajat. Tribal ingenuity was demonstrated once again when land mines, fabricated from explosives from unexploded bombs or stolen gelignite, were planted on roads, parade grounds and tracks necessitating further special precautions by troops. In addition, tribal guns were used on several occasions during attacks on posts in Waziristan.[132] As a result special defensive arrangements were necessary during 1938-1939 on the line of communication to Razmak employing khassadars, Scouts, aircraft and the retention of 3rd (Jhelum) Brigade and other units from the Field Army to supplement the normal garrison.[133]

The Manual of Operations on the North-West Frontier remained the main source of official guidance available to the Army in India in the specialised requirements of frontier warfare. Despite agreement between the General Staff, Air Staff in India and the Foreign and Political Department regarding the contents, the publication of its replacement was delayed while the operations in Waziristan were underway. The new manual was further delayed while revisions were made in accordance with the lessons of the recent

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[131] Comments and Deductions on the Khaisora Operations, Waziristan, 8th June 1937, Rees Mss, Mss.Eur.F.274/4 and A.H.Q. India Training Memorandum No. 14 Collective Training Period 1936-37, (Dehli, 1937), pp.8-12 L/MIL/17/5/2199

[132] M.I. Unofficial Letter on Afghanistan and the North-West Frontier of India, (Simla, 1939), L/WS/1/192, Brabourne to Zetland, 7th Oct. 1938, Linlithgow Mss, Mss.Eur.F.125/6 and Lt.-Col. H.E. Newman, 'Waziristan 1937 to 1939', R.E.J., 98, 2, (1984), p.118

[133] See Report by His Excellency the Commander-in-Chief in India on the operations carried out in Waziristan between the 16th December 1937 and the 31st December 1938 and Report by His Excellency the Commander-in-Chief in India on the operations carried out in Waziristan between the 1st January 1939 and the 31st December 1939, 6th June 1940, L/MIL/7/16971

fighting, by suggestions from the India Office and by disagreements in London. When the first draft was submitted to the India Office for approval in February 1936, General Sir W.H. Bartholomew, the C.G.S., observed:

> It is most comprehensive and much larger than the old manual, but I think that it is right that this should be so. It is intended primarily for the use of officers of both services at Home and in India who have no knowledge of the Frontier or of Frontier fighting. I do not think there is anything controversial in the book so far as matters of principle are concerned. As regards the details of tactical methods, one can never please everybody and I daresay some experienced frontiers men will disagree with several things in the book with which others, equally experienced, will be in full agreement![134]

Despite the C.G.S.'s desire to have the new manual published before the forthcoming collective training season, the sections referring to aircraft became a subject of controversy at the India Office. Lord Zetland strongly opposed the publication of information relating to air operations after growing public criticism in India and England. Indeed, the Secretary of State for India decided that while the sections relating to the army were acceptable for publication, those relating to the R.A.F. should be classified for 'Official Use Only' and be given a limited circulation.[135] This decision was a bitter disappointment to Major-General C.J. Auchinleck, who had spent a considerable amount of time drafting the manual and securing agreement between the R.A.F., military and political authorities in India. General Sir Robert Cassels, the Commander-in-Chief in India, intervened in May 1937 in an endeavour to prevent what he regarded as the 'emasculation' of the manual. Writing to the Military Secretary at the India Office he observed:

> The whole object of the book is to present a comprehensive picture of modern frontier warfare, as at present in progress to all concerned with the idea of emphasising need of co-

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[134] Bartholomew to Wilson, Feb. 1937, L/WS/1/257
[135] Wilson to Auchinleck, 18th May 1937, and Auchinleck to Wilson, 27th May 1937, L/WS/1/257

> operation between land and air forces and their dependence on each other, which have been unfortunately been lacking in the past. I have done everything possible to put this right, and it is not too much to say that present operations have proved that this object has been achieved.[136]

This request and support from both the Air Ministry and War Office forced the India Office to reconsider its decision, and the manual was completely reclassified as 'For Official Use Only', although it was now too late for it to be printed during 1937.[137] Its arrival was eagerly awaited in India by both services as a means to improve relations and to provide guidelines regarding the conduct of operations under modern conditions. Indeed, it was hoped by R.A.F. officers that the new manual would facilitate further understanding and close co-operation between the two services in India and become a 'live doctrine' that would ensure aircraft would be used to the best advantage.[138] Air Commodore R.H. Peck, acting A.O.C. in India, noted in October 1937: 'The issue of the new frontier warfare manual will be a great help in improving the employment of the air and there is no doubt that the authorities here, led now by General Vesey, are genuinely anxious to get it right.'[139] Despite such support, further differences regarding types of air operations used by the R.A.F. on the frontier during 1938, originating primarily from the Air Staff in England, caused further delay and it was not until November 1938 that a final draft was approved for publication.[140]

The Manual of Operations on the North-West Frontier was supplemented by further information published in the annual report on collective training and the service press during 1938. A small section was included in the annual training report for the Army in India issued in July 1938 containing further lessons from the ongoing fighting in Waziristan, but information was deliberately limited pending the publication of a new official training manual.[141] The service press provided the most important means of disseminating

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[136] Commander-in-Chief to Wilson, 28th May 1937, L/WS/1/257
[137] Wilson to Auchinleck, 2nd July 1937, L/WS/1/257
[138] Newall to Deverell, 20th Sept. 1937, P.R.O. AIR 8/529
[139] Peck to Newall, 16th Oct. 1937, P.R.O. AIR 8/529
[140] Waldie, op cit, p.216, J.S Shattock, Under Secretary to the Government of India Defence Department, to the Secretary Military Dept, India Office, 28th June 1938, and SSI to Government of India Army Department, 3rd Nov. 1938, L/WS/1/257
[141] A.H.Q. India Training Memorandum No. 16 Collective Training period 1937=38, (Dehli, 1938), p.1 L/MIL/17/5/2199

information regarding the recent fighting. During 1938 a series of articles appeared in the J.U.S.I.I. ranging from accounts of the operations to detailed tactical proposals regarding the conduct of frontier warfare in the future.[142] Many officers were eager to record their experiences and discern lessons from the recent operations, although not all were satisfied with the tactical methods or system of training employed by the Army in India. At the direct request of the Deputy C.G.S., Major-General C.J. Auchinleck, Colonel F.I.S. Tuker prepared a paper for the J.U.S.I.I. based on the innovative method of road protection used by the 1/2nd Gurkha Rifles on the Razani sector of the lines of communication, in which a system of aggressive patrolling by day and night, based on perimeter camps and permanent piquets throughout the sector, replaced the system of static road protection used elsewhere in Waziristan.[143] Writing under the pseudonym "Auspex", he once again took the opportunity to condemn the doctrine of frontier warfare used by the Indian Army, observing that the immense value of armoured and mechanised forces supplied from the air and supported by close support aircraft had not been fully exploited. Particular criticism was reserved for brigade columns and the system of piqueting on the move:

> The mountain warfare doctrinaires must be stopped from propounding it as a normal and good method. The Pathan's small-bore weapons killed it thirty years ago; it only suited the *jezail*. The nearer a commander can bring mountain warfare into line with modern warfare, the nearer he comes to success, for he will bring his superior firepower to bear to its maximum extent and at the right time.[144]

Despite such strong condemnation of orthodox wisdom, the official doctrine of frontier warfare remained largely unchanged although units and formations stationed on the frontier still experimented with new tactics. For example, during the Kharre operations in July

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[142] See Lt.-Col. C.J. Wood,'An Operation in the Vicinity of Spinwam - 20th October 1937', J.U.S.I.I., 68, 292, (1938), pp.255-66, Maj. M. Glover,'Ordnance Service in Waziristan', J.U.S.I.I., 68, 292, (1938), pp.311-15 and Maj. J.E. Hirst,'Second Echelon in Frontier Operations', J.U.S.I.I., 68, 293, (1938), pp.431-447

[143] Lt.-Col. G.R. Stevens, History of the 2nd King Edward VII's Own Goorkha Rifles (The Sirmoor Rifles), (Aldershot, 1952), Vol. III pp.33-4

[144] Auspex,'The Dream Sector, L. of C.', J.U.S.I.I., 68, 291, (1938), p.209

1938, two brigades and the Tochi Scouts stayed out in mutually supporting laagers overnight instead of employing an orthodox perimeter camp.[145]

The new manual - *Frontier Warfare (Army and Royal Air Force) 1939* - was issued to British and Indian units and R.A.F. squadrons during March 1939, after hurried revisions were made taking into account the recent changes in the organisation of infantry battalions. It provided the Army in India with a comprehensive and up-to-date formal written doctrine of frontier warfare upon which a comprehensive system of training was based. 20,000 copies were printed and circulated in England and India where it formed the basis of training for companies and higher formations for the remainder of British rule. It was considerably larger than its predecessor and codified the existing doctrine of frontier warfare currently in use in India modernised to the extent of discussing the use of aircraft, light tanks, and heavy artillery in tribal territory. The greater degree of understanding and co-operation between the Indian Army and the R.A.F. was reflected in its contents, despite continued differences regarding the higher direction of tribal control, and it provided a comprehensive picture of frontier warfare that emphasised the need for co-operation of land and air forces and their dependence on each other. It described, in considerable detail, how aircraft could carry out air blockades, proscriptive air action, destructive air action and air co-operation in mountain warfare. Despite growing criticism of certain aspects of the existing doctrine, the manual emphasised the continued importance of the established orthodox doctrine of frontier warfare, with columns, protective piquets and perimeter camps. It warned officers, however, against the dangers of operations becoming too stereotyped, as well as dismissing a growing belief in the fighting ability of Pathan lashkars. The Indian Army's long experience of operations on the frontier was reflected in footnotes throughout the manual which contained references to prior operations. Officers were encouraged to read histories of military operations and it included a bibliography listing works dealing with both the frontier and frontier warfare.[146] The new manual was complemented by other sources of unofficial guidance such as articles

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[145] Lt.-Col. F.C. Simpson,'Review of Frontier Policy from 1849-1939', J.U.S.I.I., 74, 317, (1944), p.484

[146] Frontier Warfare - India (Army and Royal Air Force.), (Dehli, 1939)

in the service press that discussed the conduct of frontier warfare under modern conditions, or advocating either the wider use of mechanised units or the development of light infantry skills in the border hills.[147] Perhaps the most significant addition to the unofficial literature relating to training for fighting in tribal territory was a revised edition of *Passing it On: Short Talks on Tribal Fighting on the North-West Frontier of India* published in 1939, which contained an additional chapter written by several Indian Army officers that discussed the lessons of the 1936-37 operations in Waziristan.[148]

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[147] See "Vibgyor", 'Mechanisation or Motorisation: the Application of Mobility to our Frontier Problems', J.U.S.I.I., 69, 295, (1939), pp.204-11, Anon, 'Cooperation between Light Tanks and Infantry (With special Application to Mountain Warfare vis-a-vis Infantry Battalion Officers), J.U.S.I.I., 69, 296, (1939), pp.309-23 and Maj. C.M. Wingfield, 'Mountain Warfare', J.U.S.I.I., 69, 297, (1939), pp.493-505

[148] Gen. Sir A. Skeen, Passing it On: Short talks on Tribal Fighting on the North-West Frontier of India, (London, 1939), 4th Ed.

Conclusion
Frontier Warfare in Retrospect and Prospect, 1939-1947

The Army in India possessed 90 years of sustained extensive experience of conducting military operations against trans-border Pathan lashkars when the Second World War broke out in September 1939. Despite a long series of major campaigns and a succession of border skirmishes, the Pathan tribes remained fiercely independent and an insistent threat to the security of the settled areas. Apart from where roads had penetrated the hills, the main distinguishing features of frontier warfare remained essentially unchanged from those initially encountered in 1849. Imperial troops still had to move and fight in remote mountainous areas, with all the attendant problems of transport and supply, against elusive lightly armed tribal lashkars that were, in comparison, inured to local conditions and expert in the tactics of guerrilla warfare. As other modern supporting weapons could not be effectively exploited in the hills of tribal territory, frontier warfare remained primarily the preserve of the infantryman and the pack mule. The need for a coherent formal written doctrine of frontier warfare for imperial troops and the R.A.F. therefore remained as pressing as ever due to a combination of the mountainous terrain in independent territory and tribal armament, tactics and military characteristics. Minor tactics on the frontier remained relatively unchanged from those originally developed by the P.F.F., and later disseminated to the rest of the Army in India after the Tirah Campaign, as they were more dependent on the terrain than any other factor. Although frequently termed mountain warfare, the operations carried out in tribal territory were very different from those practised in Europe, representing a specialised form of 'savage warfare' tailored to local military requirements in India.

The regiments of the Indian Army were now highly proficient in the 'art' of frontier warfare as a result of a system of specialised training combined with frequent opportunities for active service in tribal territory. Although troops stationed in the N.W.F.P. still had to be warned repeatedly to maintain alertness, the vast majority of Indian Army units, by tradition, training and experience were now

highly skilled in the intricacies of frontier warfare.[1] Indeed, many regiments, especially those that belonged to the P.F.F., regarded themselves by tradition as specialists in this type of fighting. A comprehensive range of official training manuals, incorporating lessons learned and a wealth of frontier fighting experience, were available to British officers which described in elaborate detail the principles and minor tactics of frontier warfare, as well as official histories, handbooks and gazetteers containing detailed information regarding the trans-border Pathans and tribal territory. Training in frontier warfare remained the responsibility of individual regiments, supervised by the staff and commanders of the formations to which they belonged, during the normal course of individual and collective training each year. Standing Orders issued by higher formations and brigades complemented the official manuals and laid down local variations in minor tactics and details that took into account the local terrain. Senior officers also received instruction in the specialised staff duties required when conducting operations in tribal territory, at both the Staff Colleges at Camberley and at Quetta. When the 2/2nd Gurkha Rifles arrived in Waziristan, for example, in October 1939 the Commanding Officer and all company officers had prior frontier experience while the rest of the battalion had received intensive instruction based on official training manuals. A. Hayter later observed:

> We had already heard many lectures, read many pamphlets, and carried out many TEWTS (Tactical Exercise Without Troops) on Frontier Warfare, to teach us the chain of command, administrative planning, evacuation of casualties, the tactical situations to be expected and their solution.[2]

The military authorities in India clearly still accepted that pragmatic ad-hoc adaptation to local military requirements, 'making it up as you went along' or common sense was simply insufficient to prevent unnecessary casualties, although the bare essentials of frontier warfare were simple enough. T.R. Mockaitis is simply incorrect to assert that: 'In the bump and shove of military life on

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[1] Elliot, op cit, p.1
[2] A. Hayter, The Second Step, (London, 1962), p.98

the Northwest Frontier… soldiers were left to the time-honoured method of "making it up as they went along."'[3] Frequent 'regrettable incidents' made General Staff realise that the provision of a formal written doctrine and system of training was imperative, perhaps more so than in any other part of the Empire, to prevent British and Indian units suffering unnecessary casualties that might otherwise cause a minor incident to escalate into a major conflict. Nevertheless losses were still suffered at Pathan hands, although normally these occurred as a result of either a lack of any previous experience or a failure to obey the accepted 'laws' of frontier fighting. Moreover, such incidents constantly underlined the need for a specific tactical doctrine for frontier warfare and specialised training which had to be taught and 'passed on' to new generations of officers and men as the penalties of neglect were all too apparent.

The manuals promulgated by the General Staff in India represented a clearly thought out formal written doctrine upon which was based a comprehensive and progressive training programme to ensure its acceptance throughout the Army in India. These manuals improved readiness and ensured uniformity of training amongst units throughout India, guaranteeing that regiments from various commands could operate together at short notice. As a result of the ongoing commitment to tribal control and offensive military strategies in event of war in Afghanistan, the General Staff devoted considerable serious attention to preserving, formulating, and transmitting information relating to the conduct of frontier warfare as it represented a definite local, immediate and long-term military problem. This was an important reflection of military professionalism directed towards imperial requirements rather than in imitation of European practice. Training manuals were periodically revised and annual instructions issued to direct training, incorporating new ideas and experience gained during recent operations and modifications to existing tactics caused by changes in military organisation and equipment. As R. Gregorian has recently observed, a combination of near constant active service and a generally more professional attitude than its British counterpart, meant the Indian Army was more reflective and responsive to changes on the colonial

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[3] T.R. Mockaitis, British Counterinsurgency in the post-imperial era, (Manchester, 1995), p.133

battlefield.[4] Such skills also had relevance in other theatres of war in which imperial troops were employed. In comparison, the British Army at home concentrated on the tactics of a conventional European conflict against relatively similarly armed, trained and equipped opponents. Those British units that served in India arrived with training based on F.S.R. and without any specific instruction for local Indian requirements. While in India they trained in accordance with local directives, but were never able to acquire the same degree of efficiency in the specialised tactics of hill warfare as Indian units. A combination of short and infrequent tours of duty in tribal territory and the reluctance of British service officers to acknowledge that special training was required meant that they often suffered unnecessary casualties at tribal hands.

The official system of manuals and training was complemented by other important means of communication outside official channels by which the tactics of mountain warfare were 'passed on'. A sizeable range of books, pamphlets and unofficial text-books were available to British officers written by their predecessors which provided further sources of information and guidance regarding operations against the trans-border Pathans. These amplified the necessarily condensed and often cryptic language of the drill books and training manuals often presented in a too indigestible form for junior officers and N.C.O.s. *Small Wars: Their Principles and Practice* remained the most easily available and most comprehensive treatment of colonial warfare available to officers in England. It is only possible to speculate, however, how widely it was read and to what extent training was based on its guidelines, although the book had been used at both the Staff College at Camberley and the R.A.F Staff College at Andover during the inter-war period.[5] *Passing it On: Short Talks on Tribal Fighting on the North-West Frontier* written by Major General Sir Andrew Skeen assumed an authoritative position in India and gained almost official acceptance after it was issued to British and Indian units. Several editions were published before the outbreak of the Second World War, revised and updated to reflect changes in imperial equipment and tribal tactics. Other sources of information and reference were

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[4] R. Gregorian, 'Jungle Bashing' in Malaya: Towards a Formal Tactical Doctrine', Small Wars and Insurgencies, 5, 3 (1994), p.342

[5] A.D. English, 'The RAF Staff College and the Evolution of British Strategic Bombing Policy', J.S.S., 16, 3, p.420

available to officers in the form of regimental histories and various published personal accounts of operations against the trans-border Pathan tribes.

The military press represented an important means of 'passing on' information to officers. The perceived 'lessons' of frontier warfare were regularly discussed at lectures given by serving Indian Army officers held at the U.S.I.I. at Simla, while the R.U.S.I. and other professional military organisations in India and England deliberated periodically upon the subject. The sheer number of articles published in the J.U.S.I.I. indicate considerable professional interest amongst British officers regarding frontier fighting. Articles ranged from general discussions of frontier policy and the role of the army, to accounts of operations, potential new tactics and training, and detailed technical discussions of tactics and equipment for each arm. These represented an important means of broadening professional knowledge amongst British officers regarding tactics, training and the use of new equipment against the trans-border tribes. The service press also provided a medium where officers dissatisfied with the methods employed on the frontier could present arguments for the adoption of new equipment and methods of training.

The uninterrupted sequence of military operations in tribal territory meant the ranks of Indian regiments contained a large permanent cadre of long serving British and Indian officers, N.C.O.s and other ranks who provided the final means of 'passing on' information relating to hill warfare. The comparatively short intervening period of time between tours of duty in the N.W.F.P. meant that nearly all Indian units now contained officers and men who had personal knowledge and recent experience of tribal territory and its inhabitants. Information regarding the conduct of operations was passed on to new subalterns and recruits by these men during training. Nearly all Indian Army officers above the rank of Major during the inter-war period had served on the North-West Frontier as subalterns and knew by personal experience what was involved in military operations against the trans-border tribes. As long as the continuity of training and experience was not interrupted this system worked effectively, but the transmission of information by word of mouth was haphazard at best and frequent omissions and errors often occurred.

The conduct of frontier warfare was not the sole task performed by the Army in India and the training, organisation and equipment intended for its other roles affected its tactical effectiveness during operations in tribal territory and approach to training. Units serving in the Army in India were always primarily trained and organised for conventional military operations, either in Asia or as part of an imperial expedition, although they were furnished with lower scales of equipment. British officers always perceived themselves as training first and foremost for a conventional conflict, although this was tempered by a recognition of India's local military requirements of frontier warfare and internal security (the latter always came a poor third in terms of priority). As a result it proved difficult to achieve the correct balance between the time devoted to training for conventional operations and that for frontier warfare, especially during peacetime when local day-to-day military requirements in India always loomed larger in the minds of Indian Army officers. During the twentieth century the pendulum swung from one extreme to another with regard to the importance attached to specialised training in hill warfare, as preparations for a conventional conflict waxed and waned or when the frequency of operations in tribal territory declined.

The conflicting requirements of the two types of operation became more explicit following the First World War when it became apparent that the two systems of training were not only at great variance, but almost contradictory in many respects. Training and equipment for conventional warfare, moreover, directly affected the military effectiveness of imperial troops during operations in tribal territory during the inter-war period. The relative mobility of Indian columns operating in the hills progressively declined as they became dependent on supporting arms and services, tying them to fixed lines of communication after modern arms and heavy equipment, intended for 'civilised warfare', were adopted. Although the construction of roads in Waziristan and other parts of tribal territory eased supply and administrative difficulties they did not remove the essential problem encountered by imperial troops moving through the hills. Armoured cars, light tanks, lorries, field and medium artillery were increasingly employed in the immediate vicinity of roads, as well as units with higher scales of equipment. The mountainous terrain in tribal territory afforded little further scope

for mechanisation, however, apart from light tanks, making pack mules and infantry essential when columns operated in the hills. The tactical flexibility and mobility evident in prior frontier campaigns progressively declined, as it was impossible to reconcile the heavy scale of equipment carried by regular troops and the attendant first line mule transport with rapid cross-country movement over mountainous terrain. Despite endeavours to improve their speed and mobility, Indian columns could not match that of lashkars as increasing quantities of heavy equipment, supplies and maintenance services exacerbated transport and supply problems that had always dogged operations on the frontier. In many respects the commitment of the Indian Army to the frontier mirrored the paradox encountered by the United States army during the nineteenth century when fighting against native American Indians. The commitment to tribal control reduced its effectiveness in conventional military operations, while at the same time the army's normal preoccupation with conventional war unfitted it for its frontier mission.[6] The various discussions regarding the resuscitation of the P.F.F. in the 1920s and 1930s reflected widespread recognition that specially trained, lightly equipped and appropriately organised troops would be much more efficient and mobile than regulars on periodic tours of duty. However, such proposals were unacceptable as long as Afghanistan and the North-West Frontier remained the most likely theatre of operations for the Army in India, as the area provided invaluable practical experience of the terrain and tribal tactics likely to be encountered across the Durand Line. In any event, the Scouts and various militias now performed the policing and, to a lesser degree, many of the military tasks previously carried out by the frontier force when it had been under civil control.

The conduct of mountain warfare was closely studied by British and Indian troops stationed in Northern Command throughout the Second World War, although elsewhere in India attention was directed first towards training for operations against a 'modern' opponent either in mountains, desert and then jungle following the Japanese invasion of Malaya and Burma.[7] Intermittent fighting occurred in Waziristan

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[6] R.M. Utley, 'The Contribution of the Frontier to the American Military Tradition', in H. R. Borowski, (ed.) The Harmon Memorial Lectures in Military History, 1959-1987, (Washington, 1988), p.58

[7] Army in India Training Memorandum, No. 2 War Series, (Simla, 1940), p.1 L/MIL/17/5/2240

against elusive tribal gangs which inflicted a steady trickle of casualties on the units comprising the garrison. As the commander of Razmak brigade noted on 24th November 1939: 'Last week we had 16 more casualties on one day, in fact we are losing more men here than the Army is in France!'[8] Between 1939 and 1945 regiments stationed in Northern Command were intensively trained in frontier warfare, as well as in the modifications required if the tribesmen were assisted by foreign troops.[9] *Frontier Warfare - India (Army and R.A.F.)* remained the main source of official guidance throughout the war, although amendments were added as further combat experience was collated.[10] The time-honoured doctrine of tribal warfare had immediate relevance for the garrison in Waziristan when, in February-May 1940, two brigades and supporting troops covered the construction of Frontier Constabulary posts in the Ahmadzai salient, used as a jumping-off point for tribesmen raiding the Derajat.[11] The importance of specialised training in frontier warfare was further emphasised on the night of 7th/8th December 1940, when the 5/8th Punjabis lost 58 killed and 55 wounded near Razmak after a demoralised piquet unwisely attempted to retire to a nearby perimeter camp opening itself to attack by a Mahsud lashkar.[12] Shortly after the incident, one British officer observed: 'Mountain warfare is an art and an art demands practice. When well done it is a beautiful thing, distinguished by clear cut lines and firm execution but when botched it becomes like a daub, a mass of aimless blurred strokes and smudges. And always the penalty for clumsiness, for failing to fit the picture together properly, will be casualties.'[13] Further large scale operations and minor skirmishes continued against elusive lashkars led by the Faqir of Ipi throughout the rest of the war.[14]

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[8] Lewis to Wife, 24th Nov. 1939, Lewis Mss, I.W.M. 74/48/1

[9] W.H. Alston, "My Day and Age" The Memoirs of William Lowry Alston at one time a British Officer in H.M. Indian Army 1917-1947, (Unpublished T.S. Memoir), Vol. VI p.2, Vol. pp.33-4 and Vol. VIII, pp.32-3 N.A.M. 8005-151

[10] Army in India Training Memorandum No. 14 War Series January-February 1942, (Simla, 1942), App. F

[11] Defence Department Despatch No. 2 of 1941: Operations in Waziristan from the 1st January 1940 to the 24th May 1940, 15th Feb. 1941, L/WS/1/1526

[12] Brig. L.E. Dennys, 'Report of Action on Tabe Zangai on the Night of 7/8th Dec. 1940, L/MIL/7/16971

[13] T.J. Phillips, 'Diary Extracts', 23rd Feb. 1941, Phillips Mss, Mss.Eur.C.393/3

[14] See War Department Despatch No. 1 of 1942: Report by His Excellency the Commander-in-Chief India on the operations in Waziristan between 25th May 1940 and 30th September 1941, 25th Sept. 1942, and War Department Despatch No. 1 of 1943: Report by His Excellency the Commander-in-Chief in India on the operations carried out in Waziristan between the 1st October 1941 and 31st December 1942, 2nd Aug. 1943, L/WS/1/1526

The general military skills learnt on the frontier were also deemed to have significance during the Second World War in other theatres of war, although the specialised minor tactics of frontier warfare were generally conflict specific. For example, at the request of the War Office, twenty officers were provided by the Indian Army in April 1940 to act as advisers in mountain warfare to British units preparing for service in Norway.[15] In the mountains of Italian East Africa, the skills learnt in tribal territory had immediate relevance to imperial troops.[16] An Army in India Training Memorandum noted in 1941, with regard to units that had served on the frontier: 'They may not have learnt all about modern warfare, but they had learnt the basic lessons, leadership, discipline, endurance, speed, fieldcraft; all these against a critical teacher - the Pathan.'[17] When German units advanced through the Caucasus, it appeared that such skills had immediate relevance to the troops remaining in India. A pamphlet produced in India in 1941, which described tactics required against European troops in mountainous terrain, noted:

> The Army in India starts with having studied the Pathan and his ways and having acquaintance with conditions, tactical and administrative, of fighting in the mountains. It should, therefore, not only be more mobile than its prospective enemy, but should also be able to adapt the Pathan's harassing tactic to worrying a more stereotyped opponent both near the battle front and on the L. of C.[18]

Moreover the skills learnt in frontier warfare were also deemed of value for jungle warfare, as long as they were complemented by a period of intensive training to develop 'jungle sense' and to overcome initial 'jungle phobia'. A report produced by the 1943 Infantry Committee noted: 'Troops trained in frontier warfare should quickly assimilate the technique of jungle warfare, owing to its

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[15] GOI Defence to Department to SSI No. 824, 24th April 1940, L/WS/1/377 and Prendergast, op cit, p.114

[16] Brig. W.E. Condon, The Frontier Force Rifles, (Aldershot, 1953), p.290

[17] Army in India Training Memorandum No. 9 War Series July 1941, (Dehli, 1941) L/MIL/17/5/2240

[18] Military Training Pamphlet No. 7 (India) Extensive Warfare (Notes on warfare in mountainous country between modern forces in Eastern theatres.), (Simla, 1941), p.3 2nd ed. L/MIL/17/5/2248

similarity in principle to mountain warfare, and to the fact that so much jungle country is also mountainous.'[19]

The British and Indian units serving in the border garrisons were once again 'milked' of experienced officers, N.C.O.s and men and replaced by an influx of inexperienced and untrained Emergency Commissioned Officers and new recruits. A series of mountain warfare courses were run initially by Northern Command, using instructors and demonstration troops from 1st (Abbottabad) Infantry Brigade, on an ad-hoc basis for new units, to provide trained officers capable of imparting instruction to their men and thereby avoid a repetition of the events of 1919-20.[20] An Army School of Frontier Warfare opened at Kakul in March 1941 to instruct British and Indian N.C.O.s, regimental officers and formation commanders in Northern Command and Western (Independent) District.[21] Eleven month-long courses were held annually, each of which had vacancies for 100 students selected from British and Indian battalions, Indian States Forces and the Nepalese Contingent, and with a smaller proportion allotted to personnel from armoured, engineer, artillery, R.A.F. and Indian Air Force units. Particular attention was given to officers from British units, the majority of whom lacked any knowledge of frontier warfare or the Pathan tribes. Senior officers of new units, or those about to move to the frontier for the first time on a tour of duty, were given preference on each course. An ability to 'pass it on' also acted as the main guide in selecting candidates, who were tested and ranked in their ability as instructors at the end of each course before returning to their units.[22] The syllabus covered basic tactics, battle procedure, fire and movement, piqueting, advance and rearguard duty, patrolling and administration. It also taught various techniques employed for individual, platoon, company and battalion training and culminated with the duties required of a frontier brigade operating in tribal territory. An attached demonstration battalion gave presentations of piqueting, covering fire, ambushes,

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[19] Report of the Infantry Committee 1943, 1st-14th June 1943, L/WS/1/1371

[20] Capt. B.J. Donlea,'Notes on Mountain Warfare Course Abbottabad,' April 1940, Donlea Mss, L.H.A., Col. W.N. Nicholson, The Suffolk Regiment 1928 to 1946, (Ipswich, 1947), p.151 and Letter to Author from Lt.-Col. R.M. Maxwell, 14th Sept. 1994

[21] Under Secretary to the Government of India, Defence Department (Army Branch), to Chief of the General Staff, 7th March 1941, L/WS/1/529

[22] Courses of Instruction, India No. 11 Frontier Warfare School, India, Kakul 1941, (Dehli, 1941) L/MIL/17/5/2201, and R.M. Maxwell, op cit, p.209

and organisation for the benefit of students and a large sand-table model of the local area facilitated training.[23] Instruction in mountain warfare formed part of the syllabus at the Poona Tactical School, the Officers' Training School at Bangalore and an element of the tactical syllabus of the six month long War Course held between 1939-1945 at the Staff College at Quetta.[24] A series of military training pamphlets was also produced by the authorities in India for both army units and the R.A.F. to facilitate training of new 'hostilities only' officers and men.[25]

The increasing number of newly raised Indian units in the North Western Army during 1943 prompted an increase in the output of the Frontier Warfare School to meet growing demand. Moreover, the school supervised the production of various cinema films of operations on the frontier and also helped to develop various backpacks that would enable infantrymen to carry large loads.[26] Despite the authoritative guidance issued by the Frontier Warfare School and the existing official manuals and pamphlets, the conduct of frontier warfare was discussed in the service press by officers serving in the N.W.F.P. throughout the war, especially with regard to the employment of modern equipment now in use elsewhere by the Army in India. In an article critical of the existing tactical methods, Lieutenant-Colonel F.C. Simpson observed in 1943:

> It may be said with some justification that the present is scarcely the time for such a study of Frontier Warfare, when the attention of all soldiers is being directed to other and more pressing forms of warfare, which are of immediate and pressing concern to all the armies of the Allied nations. At the same time Frontier Warfare, and all that it implies, is one of the unpleasant things - like many others - which we have

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[23] Letter to Author from Lt.-Col. R.M. Maxwell, 14th Sept. 1994, and Interview by author with Major F. Delens, 11th Oct. 1994

[24] Prendergast, op cit, p.142, Hudson, op cit, p.225 Hudson Mss Photo.Eur.179 and Director of Military Training, General Headquarters India, to Director of Military Training, War Office, 1st Aug. 1942, App. G. L/WS/1/1364

[25] Military Training Pamphlet No. 16 (India) Platoon Leading in Frontier Warfare, (Simla, 1942) L/MIL/17/5/2258, Military Training Pamphlet No. 6 (India) The Support of Land forces in Tribal Warfare on the Western Frontier of India, 1940, (Simla, 1941) L/MIL/17/5/2247, and Army/Air Operations Pamphlet No. 8 (India) Air Forces in Support of the Army in Tribal Warfare on the Western Frontier of India 1944, (Delhi, 1944). L/MIL/17/5/2242

[26] Director of Military Training, General Headquarters India, to Director of Military Training, War Office, 18th June 1943, L/WS/1/1302

> always with us, and it can never be neglected, either now or in the future… nothing is certain except that we must always be prepared to fight on the N.W. frontier, and so we must continually be thinking of how we shall fight there when the next time comes.[27]

Opinion was still divided amongst Indian Army officers as to the respective merits of the minor tactics used on the frontier. Indeed, other officers were still sceptical of proposals to introduce modern equipment and tactics devised primarily for other theatres of war. Lieutenant-Colonel P.A. Meade pointed out: 'certain frontier procedures evolved through many years of careful thought and experience cannot be lightly discarded as too slow and cumbersome, even with the aid of most modern weapons, and that anyone who, fresh from the speed of modern war, tries to take too short a cut may possibly as a result find himself very badly bogged.'[28] Perhaps the leading critic of frontier warfare added his voice to the debate, reiterating his deeply held criticism of the 'die-hard' school of frontiersmen he had so long attacked. "Auspex" argued that it had exerted a baleful influence on the Army in India and observed:

> The less is contained in the greater: that is, that training and methods employed for fighting a modern enemy will fit us, for example, to destroy quickly a N.W. Frontier enemy and that there is no need for such a thing as old "Frontier Warfare" that some have come so much to love… In fact, the most modern methods of getting mobility will do away with most of the troublesome things in 'Passing it On'. Dear as their perpetuation may be to some whose whole claim to military learning is that they can retail them to the layman, their continuance is just simply not soldiering.[29]

Such views were given wider currency when Sir Francis Tuker chaired a committee appointed to examine the defence of the North-West Frontier, which in part criticised the 'cumbersome' and

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[27] Lt.-Col. F.C. Simpson,'Frontier Warfare in Retrospect and Prospect', J.U.S.I.I., 73, 313, (1943), p.378

[28] Lt.-Col. P.A. Meade,'Frontier Tactics Defended', J.U.S.I.I., 74, 314, (1944), p.65

[29] "Auspex",'Reflections on Mobility in land Forces', J.U.S.I.I., 74, 315, (1944), pp.155-61

'unimaginative' tactics used on the frontier and condemned the neglect of modern equipment or techniques such as air supply. It made a searing indictment of training derived from operations in tribal territory and its influence on the organisation, training and equipment of the army as a whole which had been predicated primarily on conducting small wars in the tribal areas.[30]

The Army in India returned to its normal peacetime duties of frontier policing and internal security after the Japanese surrendered in August 1945. A Training Directive issued that month ordered that troops allotted to the role of frontier defence in North Western Army should concentrate solely on instruction in frontier warfare.[31] A shortage of trained instructors ensured that the Frontier Warfare School remained open until the end of 1946 to train officers and N.C.O.s of the post-war army.[32] The importance of teaching officers about prior experiences in tribal territory was emphasised in the official history of operations on the North-West Frontier between 1920-1935 that was published in 1945. It noted:

> Wars between 1st class Modern powers come and go. Armaments and battle grounds change with each upheaval. The tribes of the North-West Frontier of India however remain as heretofore an unsolved problem. The Indian Army of the future will still have to deal with Mohmands and Afridis, Mahsuds and Wazirs. The Tangis and Kandaos of the past will again be contested. History repeats itself. Let it be read profitably.[33]

As comparatively few changes had occurred in either the tactics or the weapons employed on either side, perhaps in no other theatre of war could such a statement have had such a strong basis of fact. Endeavours were made to assimilate lessons from recent experience gained fighting against Axis troops in mountainous terrain in Europe, when training teams from Indian formations in Italy were sent to the North-West Frontier to pass on lessons regarding training and

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[30] Lt.-Gen. Sir F.I. Tuker, While Memory Serves, (London, 1956), p.360 and Frontier Committee 1945, (Calcutta, 1945), p.4 L/MIL/17/13/46
[31] G.O.C. in Chief to North Western Army, Southern Army, Eastern Command and Central Command, 28th Aug. 1945, L/WS/1/767
[32] C.G.S. to HQ North Western Army, Southern Army, Eastern Command and Central Command, 5th Sept. 1945, L/WS/1/789
[33] Official History 1920-35, p.vii

fighting with modern equipment.[34] In an article published by the J.U.S.I.I. Major W.J. Spaight revealed continued differences of opinion regarding the relevance of the doctrine still employed by imperial troops in tribal territory.[35] His comprehensive indictment of the current methods used by the Army in India on the North-West Frontier prompted other highly experienced frontier officers to vigorously defend both the tactics employed by imperial troops and the value of training derived from service in tribal territory.[36]

The conduct of mountain warfare also attracted considerable official interest in the immediate aftermath of the war, with regard to applying modern tactics and equipment to the conduct of tribal warfare, at the same time as discussions were underway for the removal of advanced troops from tribal territory.[37] An experimental brigade, with an attached Operational Research Section, was formed at the request of Field Marshal C.J. Auchinleck, the Commander-in-Chief in India, in Northern Command during the autumn of 1946, to study and solve the problem of how to conduct operations against an elusive guerilla opponent in a quick and decisive manner. After close consultation with experienced frontier officers, extensive trials were conducted by No. 47 (Experimental) Infantry Brigade in the northern Punjab and N.W.F.P. in October 1946-March 1947. The aim was to provide the three Frontier Brigade Groups then stationed along the border with tactical guidance, to determine the principles underlying the employment of Indian troops in different circumstances and the different tasks to be allotted to their commanders and, finally to modify and develop modern methods of fighting for all types of operations especially with regard to increasing mobility. The British Army clearly had an eye on the future as its brief also included operations against guerrillas in areas other than India.[38] Despite experiments with armour, airborne troops, close support and transport aircraft, and other modern equipment, the trials revealed that little

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[34] Director of Military Training to the Director of Military Training, War Office, 1st Aug. 1945, L/WS/1/767

[35] Maj. W.J. Spaight,'The Frontier Myth', J.U.S.I.I., 75, 320, (1945), pp.374-6

[36] See Brig. M.R. Roberts, 'Frontier Realities', J.U.S.I.I., 76, 322, (1946), pp.53-9 and "The Admiral",'Further Thoughts on Frontier Myths', J.U.S.I.I., 76, 323, (1946), pp.225-9

[37] Record of a Conference held at Government House, Peshawar, on 24th April 1946, to discuss the Plan for the substitution of Civil Armed Forces for regular troops in the tribal areas of the North-West Frontier, 24th April 1946, L/P&S/12/3266.

[38] Brig. M.C. Frye, Director of Weapons & Equipment, to Brig. J.R. Reynolds, 6th May 1946, and Directive - The Experimental Frontier Bde, 6th May 1946, L/WS/1/1485

had changed in the conduct of mountain warfare. The normal precautions and tactical drills as laid down in *Frontier Warfare - India (R.A.F. and Army)*, evolved by the Indian Army as the result of a century of practical experience, were still relevant as the basis of operations against a tribal opponent, although it appeared that an increase in the mobility of Indian columns would be made possible by cutting down the logistical tail accompanying columns and the amount of transport and protection required on the lines of communications.[39] Brigadier T.N. Miller observed:

> It may appear that the final recommendations are not as revolutionary as the original directive demands. The reasons for this is that nothing has yet changed either in the characteristics of mountainous country or of guerilla opposition… On the other hand modern developments make possible a great reduction of the administrative tail of columns, so increasing their mobility, and enabling, bolder action against a guerilla enemy, this in turn leading to the infliction of the necessary casualties to bring them to terms in a shorter time than heretofore.[40]

The conduct of frontier warfare became irrelevant to the British Army when the Raj ended in August 1947 and the Indian Army was divided between India and Pakistan. The thorny problem of controlling the independent tribes was inherited by the Government of Pakistan, but its attention was firmly directed towards the disputed border with India. In accordance with a scheme discussed by the Government of India that involved the substitution of irregulars for the removal of the military garrison, it sanctioned the withdrawal of troops from tribal territory.[41] The four Brigade Groups still remaining in Waziristan in October 1947 were withdrawn largely without incident in November-December 1947, following which the

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[39] Mountain Warfare against Guerilla Enemy Final Report on Trials by 25 (Experimental) Infantry Brigade, April 1947, P.R.O. WO 231/34

[40] Brig. T.L. Miller, Cmd. 25 Infantry Brigade to G.H.Q. (I) D.M.T. Branch, 20th April 1947, P.R.O. WO 231/34

[41] M. Ayub Khan, Friends not Masters. A Political Autobiography, (Lahore, 1967), p.18

policing of tribal territory was left to political officers backed by various reorganised and expanded Civil Armed Forces.[42]

The British Army quickly forgot the specialised principles and minor tactics of frontier warfare, although its ranks contained a large number of ex-Indian Army officers, who had transferred to it in 1947, with considerable experience of conducting operations in mountainous terrain against lightly armed guerilla opponents. Most of the guidelines laid down in manuals of frontier warfare published in India were now only of academic interest and these manuals were soon relegated to shelves in military libraries in England and India to gather dust. Despite this the minor tactics learnt in tribal territory proved of longer-term importance for the British Army. When a S.A.S. company was deployed for operations in Oman against rebels operating on the Jebel Akhdar in the late 1950s, its commander brought with him the 'traditional wisdom' of mountain warfare learnt on the North-West Frontier.[43] Both D. Charters and T.R. Mockaitis have also noted similarities between frontier operations and those conducted by British troops in Southern Arabia in 1963-64.[44] In many respects the fighting when British troops were sent into the Radfan mountains in May-June 1964 was reminiscent of that on the North-West Frontier and generally confirmed the tactical lessons learnt regarding mountain warfare in India.[45] Major J.M. Slater observed:

> British troops… were fighting a campaign the like of which… had not been conducted on the same scale since before the Second World War, on the North West Frontier of India. Tactics were similar: mountain routes were piqueted, camps defended from a series of stone sangars and the troops were ever prey to the sniper's bullet. However, the technology of war had brought its sophistications; helicopters lifted the pickets and re-supplied

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[42] Lt.-Col. H.E. Cotton,'Operation Curzon - The Evacuation of Waziristan', R.E.J., 62, (1948), pp.183-200 and G. Curtis, 'North-West Frontier of Pakistan - an Old Problem in a New Setting', A.Q., 56, 2, (1948), pp.185-6

[43] Gen. Sir P. de la Billiere, Looking for Trouble. From SAS to Gulf Command The Autobiography, (London, 1995), pp.28-9

[44] D. Charters,'From Palestine to Northern Ireland: British adaptation to low-intensity operations', in D. Charters and M. Tugwell (eds.), Armies in Low-Intensity Conflict: A Comparative Analysis, (London, 1989), p.190 and T.R. Mockaitis 1995, op cit, p.52

[45] See Lt.-Col. T.M. Stevens, 'Operations in the Radfan, 1964' J.R.U.S.I., 110, 640, (1965), pp.335-46 and Brig. G.S. Heathcote, 'Operations in the Radfan', J.R.U.S.I., 111, 641, (1966), pp.30-40,

> isolated outposts. The firepower from guns, mortars and machine guns was impressive and air support from supersonic fighters was a far cry from the ancient Wapitis of the Frontier.[46]

It was fortunate that a large number of officers were present who had prior experience of service in tribal territory which was equally applicable in operations against similarly lightly armed tribal opponents in the Middle East. It is difficult to discern, however, any other use of such specialised minor tactics in other post-1945 campaigns, although it is perhaps in more general terms that the frontier made a lasting contribution to military science. Several historians have noted that the lessons learnt while fighting tribal lashkars had implications for counterinsurgency.[47] In many respects frontier warfare during the inter-war period was a 'hybrid' form of conflict involving elements of both a counterinsurgency and a more traditional 'small war', during which imperial troops learnt to work in close co-operation with the civil authorities and to employ limited force. T.R. Mockaitis has also argued that a combination of military experience gained in fighting lightly equipped and highly mobile guerrillas and that gained administering tribal territory, had a wider impact on later colonial campaigns. It is difficult to disagree with his conclusion that it was the administrative, policing and military skills learnt on the frontier in a form of warfare not unlike insurgency that proved invaluable in fighting guerrillas during a variety of post-war campaigns.[48] It is regrettable that the significance of the lessons learnt by British and Indian troops of the Army in India on the North-West Frontier have until now have generally been forgotten or ignored by the British Army and military historians.

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[46] Maj. S.M. Slater, 'Radfan', British Army Review, (Dec. 1981), p.16
[47] C. Townshend, Britain's Civil Wars: Counterinsurgency in the Twentieth Century, (London, 1986), p.150 and James, op cit, p.53
[48] T.R. Mockaitis, British Counterinsurgency, 1919-1960, (London, 1990), p.87

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